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ABSTRACT

This volume contains an annotated bibliography of journal articles, books, documents (including some ERIC citations) and audiovisual materials regarding the behaviors of teachers which research has shown to be consistently associated with academic learning by pupils. The bibliography is organized around 19 criteria to be used for evaluating teaching performance. They are: (1) plans, organization, and implementation; (2) academic learning time; (3) teacher's expectations; (4) teacher's awareness; (5) concurrent tasks management; (6) pace of instruction; (7) classroom management; (8) feedback to pupils; (9) time on task; (10) enthusiasm; (11) clarity of instruction; (12) task oriented/businesslike orientation; (13) variablity of instruction; (14) flexibility; (15) understanding of instructional goals; (16) teacher centered/direct instruction; (17) praise and encouragement/criticism; (18) individualization of instruction; and (19) questioning techniques. An annotated listing of audio-visual and inservice materials also organized around the 19 criteria and including availability information, and a bibliography of non-annotated references are also included. (CB)

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PLANNING FOR AN EVALUATION OF TEACHING PERFORMANCE

VOLUME II

Teacher Effectiveness: Annotated Bibliography and References

Planning Services

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PLANNING FOR AN EVALUATION OF TEACHING PERFORMANCE

VOLUME II

Teacher Effectiveness: Annotated Bibliography and References

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Planning Services

Alberta Education

August, 1985

FOREWORD

Planning for an Evaluation of Teaching Performance comprises four separately bound volumes: A Manual of Guidelines, (Vol. I); Teacher Effectiveness: Annotated Bibliography and References, (Vol. II); Evaluation Procedures: Annotated Bibliography and References, (Vol. III); and Summaries of Instruments for Use in Evaluating Teaching Performance, (Vol. IV).

The content is delimited to gathering and interpreting information about teaching and learning in classroom settings. The main focus is on behaviors of teachers that research has shown to be consistently associated with academic learning by pupils. Some attention is also directed to several classroom behaviors of pupils often found to correlate with effective learning.

The contents of the publication are intended to be used as guidelines. Readers should feel free to reject, adapt or adopt the ideas communicated as local needs dictate. All school jurisdictions have policy and structures in place for evaluating teaching performance. Hence, selections from these volumes might be identified and used in reviewing local policies, guidelines and procedures.

The companion publication, Evaluating and Improving Teaching Performance: An Inservice Kit, by Dr. Laurie Mireau is designed primarily for inservice settings. The Inservice Kit is designed for "hands-on" experience by individuals and by groups at the school and district levels. The Kit illustrates and emphasizes practical considerations and procedures useful in evaluating classroom activities and for integrating these with supervision of instruction.

An integral part of the Kit is a set of 30 videotapes (14 training tapes and 16 demonstration tapes) involving eleven classroom teachers in Edmonton Public Schools. The reader is directed to A Manual of Guidelines, (Vol. I), Appendix 2, for detailed descriptions of the 30 videotapes.

VOLUME II

TEACHER EFFECTIVENESS: ANNOTATED BIBLIOGRAPHY AND REFERENCES

Introduction

This volume includes:

1. A chart listing the 19 criteria to be considered for evaluating teaching performance, and their descriptions. For more information on the criteria, the reader is directed to Vol. 1, Chapter 4.
2. An annotated bibliography organized around the 19 categories. Inservice programs and some observation instruments related to specific criteria are also included.
3. A listing of audio-visual and inservice materials also organized around the 19 criteria.
4. A bibliography to include references not annotated.

Note:

1. The majority of annotations listed are from a) published annotated bibliographies, e.g. Canadian Teachers' Federation, b) the author's annotation, and c) the publisher's annotation.
2. When possible, there has been an attempt to cover elementary, junior high, and senior high grade levels and all subjects areas.
3. **Neither the printed nor the audio-visual materials have been evaluated.**

Chart A

Criteria Number	Criteria Name	Criteria Description
1.	Plans, Organization, and Implementation	Arrangements and procedures worked out in advance of instruction by the teacher and the extent to which these are appropriate and used.
2.	Academic Learning Time	The time a student is engaged with instructional materials or activities that allow a high level of success for that student.
3.	Teacher's Expectations	The appropriateness of the teacher's predictions of the individual's or group's achievements in a particular content area.
4.	Teacher's Awareness	Alertness to pupil behavior at all times; "withitness," having "eyes in the back of one's head" (Kounin, 1970).
5.	Concurrent Tasks Management	The efficiency and ease with which a teacher handles various classroom activities at the same time.
6.	Pace of Instruction	The rate at which learning experiences are provided for pupils by the teacher.
7.	Classroom Management	The teacher's facility to anticipate, prevent and deal satisfactorily with pupils' interpersonal and academic difficulties. Success in appropriately disciplining pupils.

Criteria Number	Criteria Name	Criteria Description
8.	Feedback to Pupils	Verbal and non-verbal responses to students.
9.	Time on Task	Engaged time; the time a student is attending to instruction in a particular content area.
10.	Enthusiasm	Teacher's display of eagerness and zeal.
11.	Clarity of Instruction	The communication of the teacher is such that the students are totally informed about what they should be doing, where to do it, and for how long, in order to ensure that students do not lose time because they are confused or because they are waiting for decisions to be made.
12.	Task Oriented/ Businesslike Orientation	The degree of academic focus and the teacher's directness in providing academically focussed instruction.
13.	Variability of Instruction	The appropriate use of variety in providing learning experiences for pupils.
14.	Flexibility	The ease with which the teacher adapts and adjusts satisfactorily to varying factors in the classroom setting.
15.	Understanding of Instructional Goals	The pupils' comprehension about what they should be doing, where to do it, and for how long.

Criteria Number	Criteria Name	Criteria Description
16.	Teacher Centred/Direct Instruction	"An instructional strategy where time spent on instruction is sufficient and continuous, content covered is extensive, goals are clear to students, materials are structured and sequential, questions are low level to produce many correct student responses, student progress is monitored, feedback is immediate and correct responses are reinforced. With direct instruction, the teacher sets the goals, plans the activities, chooses the material; questions are convergent, not divergent; interaction is structured, not authoritarian; tasks are cognitive oriented, not humanistic" (Ornstein, 1984: 343).
17.	Praise and Encouragement/Criticism	The appropriate use of positive (e.g., praise and encouragement) and negative (e.g., criticism) reinforcement methods.
18.	Individualization of Instruction	Teaching adapted to the background, ability, and needs of individual learners.
19.	Questioning Techniques	Matching the types of questions asked of the student to the characteristics of the student and to the instructional objectives.

Annotated Bibliography

TEACHER EFFECTIVENESS

1. Plans, Organization and Implementation

Berliner, D. C. Tempus educare. In P. L. Peterson and H. J. Walberg (Eds.), Research in teaching: Concepts, findings and implications. Berkeley, CA: McCutchan, 1979.

Berliner discusses a set of variables that research indicates are consistently related to student achievement. Several of these variables -- teacher goal-setting, focus of time spent in the classroom, and coverage of content -- involve teacher planning and organization. A teacher who plans thoroughly will maximize the actual learning time of her/his pupils.

Bernstein, A. Teachers' lesson plans: The myth and the reality, 1981. ERIC. ED 202 813.

The literature shows low correlation between teacher planning procedures and subsequent classroom efficiency. There exist major discrepancies among definitions of how to devise a comprehensive lesson plan, assumptions on the importance of planning, and assumptions on what classroom results a lesson plan should produce. It is suggested that a lesson plan should be viewed as an aid or an option rather than as a necessity that must be strictly adhered to.

Brophy, J. E. Successful teaching strategies for the inner-city child. Phi Delta Kappan, 63(8), April 1982.

In this article, Brophy lists eight teacher characteristics and behaviors that are associated with student learning gains; one of these is classroom management and organization, another is curriculum pacing. Research indicates the importance of planning the curriculum appropriately for the types of students and then implementing these plans adequately so that maximum learning occurs.

Brophy, J. E. Teachers' cognitive activities and overt behaviours. East Lansing: Michigan State Univ. Institute for Research on Teaching, 1980. ERIC. ED 200 561.

Recent research on teacher planning, thinking, and decision making is reviewed. The work on planning reveals that teachers do not use the objectives-based rational models stressed in textbooks, but instead concentrate on the activities included in a curriculum as they seem to relate to the needs and interests of the students. This indicates the need for training teachers to plan more effectively, and suggests the formation of alternate models of the planning process which might be more appropriate than the rational model.

Clark, C. M., and Yinger, B. Research on teacher planning: A progress report. Journal of Curriculum Studies, 11(2): 175-77, Apr-June 1979.

Describes a study of lesson planning based on the thinking processes of elementary teachers. The study focuses on how teachers gather, organize, interpret, and evaluate information to be taught.

Clark, C. M., and Yinger, R. J. The hidden world of teaching: Implications of research on teacher planning. Research Series No. 77. Paper presented at the annual meeting of the American Educational Research Association, Boston, 1980. ERIC. ED 191 844.

Five research studies on teacher planning are reviewed to discover how basic descriptive research can improve the practice. Seven findings are discussed: (1) planning is important to teachers and generally invisible to everyone else; (2) planning differs in practice from traditional prescriptions for planning; (3) planning during the first weeks of school has long range effects; (4) teacher planning transforms curriculum into instruction; (5) routines increase teacher efficiency and flexibility; (6) communicating plans puts thought into action; and (7) teacher reflection aids teacher development.

Mintz, S. L., and Yarger, S. J. Conceptional level and teachers' written plans. Paper presented at the annual meeting of the American Educational Research Association, Boston, 1980. ERIC. ED 189 030.

A study of the lesson planning procedures of 68 elementary school teachers provided categorical data on the tasks typically involved in the planning process. The results indicate that the higher conceptual level (HCL) teachers emphasize diagnosis and student characteristics in their plans, while lower conceptual level (LCL) teachers give special consideration to materials and classroom techniques. The results also indicate that there is no significant difference between HCL and LCL plans, although the differences become more significant when the teachers are further subdivided into age, grade levels taught, and length of time used for planning.

Morine-Dershimer, G. A study of teacher planning. Special Study C. Beginning teacher evaluation study. Technical report series. San Francisco: Far West Lab. for Educational Research and Development, 1976. ERIC. ED 146 160.

Twenty more effective and twenty less effective teachers were studied to determine if they differed in the ways they plan for instruction. Four variables were noted as distinguishing between the planning of the more and less effective teachers. These were: (a) whether the teacher used specific or general information in planning; (b) whether the teacher believed students had the potential to learn the material; (c) whether the teacher considered the cognitive aspects of instruction; and (d) whether the teacher produced much of his or her own instructional materials. When the findings of this study were compared to the findings of a coordinated study of teacher and pupil perceptions of classroom interaction, two of the variables were found to be important in both teacher planning and classroom interaction. These two were teacher tendency to think in generalistics rather than specifics, and teacher attention to cognitive aspects of lessons.

Ross, R. P. What's happening in elementary school classrooms? A review of selected literature, 1982. ERIC. ED 222 248.

A select portion of the educational management literature is reviewed in three sections. The first section discusses literature concerning the use of time (allocation of school time and engaged time). The second section describes classroom operations to include the format of lessons, characteristics of lesson formats, and the structure of the school day. The final section examines the management of transitions between activities, and the development and implementation of teaching plans.

Smith, H. A. Nonverbal behavior and student achievement in the elementary classroom. Paper presented at the meeting of the Canadian Society for the Study of Education, Saskatoon, 1979. ERIC. ED 181 000.

Use of classroom space, student movement in the classroom, and assorted proxemic and kinesic teacher behaviors are the foci of this study. A bibliography is appended.

Smith, L. R. et. al. Effect of teacher transitions and superfluous content on student achievement and on perception of lesson effectiveness in high school English. Journal of Educational Research, 75(3): 173-77, Jan-Feb. 1982.

This study examined the effect of teacher transitions and lesson content on lesson effectiveness as perceived by high school English students. A lesson was presented involving paralled sentence structure, and students were tested on comprehension of the material. Results indicate that teacher transitions significantly affected achievement but additional content did not.

2. Academic Learning Time

Academic learning time. The best of ERIC on educational management, number 65. Eugene, Oreg.: ERIC Clearinghouse on Educational Management, 1982. ERIC. ED 213 072.

The twelve papers, articles, and reports presented in this annotated bibliography review theories and evidence on the relationship between learning time and academic achievement in elementary and secondary schools. The papers concentrate on three types of learning time: time on task; allocated time; and academic learning time.

Bennett, N. Time to teach: Teaching - learning processes in primary schools. East Lansing: Michigan State Univ. Institute for Research on Teaching, 1981. ERIC. ED 209 242.

A model of the teaching-learning process, which was drived from empirical research on classroom teaching and learning, identifies and describes varied behavioral dimensions of the classroom and how they relate to pupil achievement. The model is based on the assumption that the total amount of engaged time on a particular topic is the most important determinant of achievement and has the components of: (1) quality of schooling; (2) time allocated to curriculum activities; (3) pupil involvement; (4) content comprehension; (5) achievement; and (6) feedback.

Borg, W. R. Teacher coverage of academic content and pupil achievement. Journal of Educational Psychology, 71(5): 635-45, Oct. 1979.

Two studies related content coverage to pupil achievement. With ability and socioeconomic status controlled, a correlation of .40 was obtained between content coverage and achievement. Significant correlations were also obtained between teacher coverage and achievement for two groups of teachers covering two units two months apart.

Cornbleth, C. and Korth, W. Context factors and individual differences in pupil involvement in learning activity. Journal of Educational Research, 73(6): 318-23, July-Aug. 1980.

Three variables: subject area, day of week, and academic activity, were examined to determine whether pupil involvement in academic learning activities is an indicator of pupil learning. Differences were found in each variable, implying more effective use of allocated instructional time will increase academic achievement.

Cotton, K. and Savard, W. G. Time factors in learning. Research on school effectiveness project: Topic summary report. Portland, Oreg.: Northwest Regional Educational Lab., 1981. ERIC. ED 214 706.

Based on the findings of thirty-five valid studies, it was concluded that the greater the amount of engaged time, the higher the levels of student achievement. Of all measures of student learning time (ALT) (a measure based on observable student behavior and is defined as the amount of time a student is engaged in an academic task) constitutes the best predicator of achievement.

Easton, J. Q., et al. Relationship among student time on task, orientation of teachers, and instructional grouping in elementary reading classes. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979. ERIC. ED 169 503.

The objectives of a study of 74 elementary classrooms in Chicago were to determine whether student attention was higher when the teacher directed instruction to a group of students within the room, if there was a difference in student attention when there was one instructional group or more than one in a classroom, and the relationship between student involvement and various school level characteristics, including scores on standardized reading tests and the percent of students from poverty-level families. It was found that the average percent of students not involved in instruction was much greater in classrooms where the teacher was oriented to a group, that involvement was lower in the classrooms when there were two or more groups than when there was only one, that student involvement is significantly related to reading achievement, and that poverty is correlated to the percent of students not involved in instruction.

Fisher, C. W., et al. Teaching behaviors, academic learning time, and student achievement: An overview. Journal of Classroom Interaction, 17(1): 2-15, Winter 1981.

A model is used to show that teaching behaviors which influence student learning have five interrelated functions: diagnosis, prescription, presentation, monitoring and feedback. Fourteen major findings from field research report relationships between academic learning time and student achievement, and a relationship is shown between teaching processes and classroom environment in relation to student learning.

Fisher, C. W., et al. Teaching behaviors, academic learning time, and student achievement: Final Report of Phase III-B, Beginning Teachers Evaluation Study. Technical Report V-1. San Francisco, Calif.: Far West Lab for Educational Research and Development, 1978. ERIC. ED 183 525.

An academic learning time model of classroom instruction is presented. Design, instrumentation, and data collection methods of this research project are outlined. Analysis of the joint relationships among the variables -- teaching processes, academic learning time, and student achievement -- are presented, as well as analyses of student attitudes and retention of achievement.

Fisher, C. W. et al. Teaching and learning in the elementary school: A summary of the Beginning Teacher Evaluation Study, Report VII-1. Beginning Teacher Evaluation Study Technical Report Series. San Francisco: Far West Lab. for Educational Research and Development, 1978. ERIC. ED 165 322.

One outcome of the Beginning Teacher Evaluation Study (BTES) was the concept of Academic Learning Time (ALT), defined as the amount of time a student spends attending to academic tasks while also performing with a high success rate. The more ALT a student accumulates, the more he or she can be assumed to be learning. Five other interrelated components of effective teaching were: diagnosis, prescription, presentation, monitoring, and feedback. Two other variables that are correlated with effective teaching were teacher academic orientation, and teacher orientation toward effect.

Fredrick, W., et al. Procedures and use of time in reading classes in high-gain and low-gain elementary schools in Chicago. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979. ERIC. ED 176 237.

A study of 39 elementary schools in Chicago was conducted to compare two sets of schools, those whose students made above average yearly gains in reading comprehension and those whose students' reading gains were below average. It was found that the proportion of time reading was the teacher's main task, differed significantly and the teachers in the high gain schools were rated by observers to have better organized lessons and to be better managers of time. The classroom observation form used in the study is included.

Hiatt, D. B. and Keesling, J. W. The dependability of classroom observations. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979. ERIC. ED 175 929. Microfiche only.

A generalized study of timed observations was conducted in 25 primary grade classes to observe teachers' use of time -- for instruction, evaluation of instruction, and classroom management -- according to the hour and day observed. Teacher behavior in each of the ten categories was observed: (1) clerical; (2) preparation of facilities; (3) preparation of materials; (4) planning for instruction; (5) instruction; (6) evaluating instruction; (7) classroom management; (8) supervision; (9) administration; and (10) not teaching. This study appeared to confirm results reported elsewhere: that a total of between four and six observations of teacher behavior, separated over several days, should provide relatively reliable measures of teacher behavior.

Huitt, W. G., et al. Monitoring and evaluating the critical dimensions of effective classrooms. Philadelphia, PA: Research for Better Schools, Inc., 1982. Paper presented at the annual meeting of the American Educational Research Association, 1982. ERIC. ED 221 597.

Methods and procedures were developed for monitoring and evaluating classrooms on critical dimensions derived from process-product research. These dimensions include student engaged time; content coverage; and success rate. A variables management strategy called the instructional improvement cycle was adopted to assist teachers and administrators in making decisions. The necessity for formal data collection in monitoring critical student behaviors and in meeting requirements of accountability and effective performance is discussed.

Jacobson, K. The relationship of individual student time allocation to reading and mathematics achievement. Report from the Project on Studies of Administration and Organization for Instruction. Madison: Wisconsin Univ. Research and Development Center for Individualized Schooling, 1980. ERIC. ED 196 906.

The major purposes of this study were: (1) to determine whether there were differences in student use of time in elementary schools; (2) to determine whether students who spend more time in reading and mathematics classes exhibit greater gains in reading and mathematics achievement; and (3) to determine whether there are quality measures of time which are related to achievement gains. Data were collected on 200 third grade students in three schools in Wisconsin. Major findings and conclusions include: (1) Students with greater amounts of allocated time exhibited significantly greater achievement gains in mathematics; (2) Time on task rates in reading and mathematics are significantly related to the student's school, teacher, and ability level; and (3) Individual students receive significantly different amounts of teacher time in reading and mathematics.

Levin, T. and Long. R. Effective instruction. Alexandria, Va.: Association for Supervision and Curriculum Development, 1981. ERIC. ED 200 572. Microfiche.

The focus of this book is on three types of variables in classroom learning and instruction: (1) active learning time; (2) feedback and corrective procedures; (3) instructional cues. A section on evaluating instruction examines the roles of classroom observation, rating scales, student questionnaires, content analysis and techniques for self examination. An annotated bibliography of research articles written since 1960 emphasizes the feasibility of implementing the ideas discussed in the book.

Noli, P. A. Principal implements an ALT program. Journal of Classroom Interaction, 17(2), November 1979.

Noli conducted research in two schools of which she was the principal. The focus of this research was academic learning time. The study continued over a two year period. Academic learning time was operationally defined as "the amount of time students were engaged with materials of intermediate difficulty." Intermediate difficulty was defined as "one step beyond the point of previous mastery." The staff and Noli learned that when schoolwork became easy, this fact was important to the students with regard to evaluation, reinforcement and transference. Standardized test scores were the highest ever achieved by the students.

Placek, J., et al. Academic learning time (ALT-PE) in a traditional elementary physical education setting: A descriptive analysis. Journal of Classroom Interaction, 17(2): 41-47, Summer 1982.

A study analyzed an elementary school physical educator's interactions with students, using the Academic Learning Time-Physical Education instrument. Data were collected to show differences in learning opportunities: (1) for girls and boys; (2) for high, medium, and low ability students; and (3) in different instructional units.

Rosenshine, B. V. Content, time and direct instruction. In P. L. Peterson and H. J. Walberg (Eds.), Research in teaching: Concepts, findings and implications. Berkeley, CA: McCutchan, 1979.

Rosenshine cites several studies that have concentrated on a correlation between "academically engaged minutes" and student learning. In one such study, two teachers were compared who were compatible regarding personal characteristics, but one allowed more opportunity to learn than the other. Teacher A allowed 30 minutes per day of reading, in which students were engaged 80% of the time. Teacher B allotted 60 minutes per day but was more casual and less insistent on high engagement. Her students were reading only 65% of the time. Although teacher B scheduled more time per day for reading than teacher A, real reading time for class B was 39 minutes while real reading time for class A was 24 minutes. When the two classes were tested on basic reading skills, the mean of score of class A was greater than that of class B.

Sanford, J. P., and Evertson, C. M. Time use and activities in junior high classes. Journal of Educational Research, 76(3): 140-47, Jan-Feb. 1983.

The relationship between teachers' use of class time and student achievement, behavior, and attitudes was examined in a study of 102 English and mathematics classes in 11 junior high schools. Time use had a measurable effect on student achievement and attitudes in mathematics classes, but not in English classes.

Saxon, J. Incremental development: A breakthrough in mathematics. Phi Delta Kappan, 63(7): 482-84, March 1982.

A pilot project in 20 Oklahoma public schools during the 1980-81 school year indicated that algebra can be mastered by students of average ability if the material is presented in increments and sufficient time is allotted for understanding to occur.

Seifert, E. H., and Beck Jr., J. J. Time/Learning relationships in secondary schools: A research report, 1983. ERIC. ED 229 853.

Sixty students in 10 classrooms in 5 high schools were extensively observed over a 10-week period. The study investigated the relationships between student achievement (algebra), and variables of student behavior, instructional strategy, and time on task. Significant positive relationships were found: (1) between achievement gain and the lecture/discussion method, the amount of time students spent on tasks related to the learning objective, and students' total engaged time; and (2) between the lecture/discussion strategy and the amount of time students spent on task. Achievement gains for individual classrooms were significantly related to minutes of time on task per classroom.

Tobin, K. G. and Capie, W. The relationships of selected dimensions of teacher performance with student engagement. Paper presented at the annual meeting of the Mid South Educational Research Association, New Orleans, 1980. ERIC. ED 194 521.

Six variables have a significant effect on student engagement in middle school science activities: (1) teacher wait-time; (2) quality of teacher questioning; (3) cognitive level of teacher behavior; (4) classroom management; (5) student formal reasoning ability; and (6) student locus of control. Data suggest the importance of formal reasoning ability and locus of control as student attributes that affect engagement. Engagement rates appear to be enhanced when teacher questions are relevant, clear, and focussed at a variety of cognitive levels. Higher rates of student engagement are associated with higher measures of classroom management and teaching behaviors that are at a higher cognitive level.

3. Teacher's Expectations

Allington, R. L. Teacher interruption behaviors during primary-grade oral reading. Journal of Educational Psychology, 72(3): 371-77, June 1980.

Teachers' verbal behaviors following oral-reading errors of primary-grade children were contrasted for high and low-ability readers. Teachers were more likely to interrupt poor readers who erred than good readers. The types of interruptions also differed as a function of reading ability level.

Amato, J. A. Social class discrimination in the schooling process: Myth and reality. Urban Review, 12(3): 121-30, Fall 1980.

Examines two factors in social class bias in schooling: (1) the bias of school personnel as reflected in teacher classroom behavior and ability grouping decisions; and (2) the schools' meritocratic ideology.

Bognar, C. J. Dissonant feedback about achievement and teachers' expectations. Alberta Journal of Educational Research, 28(3): 277-87, Sept. 1982.

Investigates impact of achievement test results (N=285) on 13 sixth-grade teachers' expectations using hypotheses from cognitive dissonance theory. Shows teacher expectations changed very little as a result of feedback, and test results for both under- and overestimated students were rejected.

Brookover, W. B. and Lezotte, L. W. Changes in school characteristics coincident with changes in student achievement. Occasional Paper No. 17. East Lansing: Michigan State Univ., Institute for Research on Teaching, 1979. ERIC. ED 181 005.

An in-depth analysis of eight elementary schools, six of which were characterized by improving student achievement and two of which were declining in student achievement. Data were collected through questionnaires and personal interviews. Ten major findings and 10 recommendations for improvement of student achievement are discussed, along with a detailed presentation of relevant data. The most persuasive finding concerned teachers' and principals' attitudes toward student achievement. The staff in the declining schools had low opinions of their students' abilities, while the staff in the improving schools had high opinions of student ability.

Cherry, L. J., and Berman L. S. Teacher-Student interaction and teachers' perceptions of students' communicative competence: A cross-sectional study. Technical Report No. 473. Madison, Wisconsin Univ. Research and Development Center for Individualized Schooling, 1978. ERIC. ED 166 670.

The relationship between teachers' expectations of students' communicative competence in the classroom and certain aspects of teachers' language during interaction with students was investigated in a study involving 55 nursery school and primary school children and their seven female teachers. The teacher expectation model used in the study proposed that teachers form expectations of students' abilities, that they interact differentially with students depending upon those expectations, and that the expectations are directly related to students' achievement. Results of a sociolinquistic analysis of samples of teacher/student interaction during classroom lessons suggested that the original version of the teacher expectation model was neither powerful nor consistent in its predictions.

Clifton, R. A. The effects of students' ethnicity and sex on the expectations of teachers. Interchange on Educational Policy, 12(1): 31-38, 1981.

A study examining the relationships among students' ethnicity, sex, teacher expectations, and academic achievement indicates that teacher expectations, which are sometimes based on sex and/or ethnic stereotypes, affect student academic achievement.

Clifton, R. A. Ethnicity, teachers' expectations and the academic achievement process in Canada. Sociology of Education, 54(4): 291-301, Oct. 1981.

Examines the effect of teacher expectations on differences in achievement between German-speaking and French-speaking ninth graders in English-speaking classrooms. Results suggest that teachers base their expectations on student intellectual abilities and previous performance rather than upon ethnicity or other characteristics.

Cooper, H., et al. Relations between student achievement and various indexes of teacher expectations. Journal of Educational Psychology, 74(4): 577-79, Aug. 1982.

The relative effectiveness of three measures of teacher expectations of predicting students' achievement was studied. Teachers' perceptions of student ability and the discrepancy between teacher-perceived ability and student-tested ability were related to achievement change. The amount of improvement the teacher expected was unrelated to the other measures.

Cooper, H. M., et al. Teachers' beliefs about interaction control and their observed behavioral correlates. Journal of Educational Psychology, 72(3): 345-54, June 1980.

Teachers viewed interactions with low-expectation students as less controllable than those with high-expectation students and teacher initiations were perceived as more controllable than child initiatives. In addition, less perceived control over a student was associated with less feedback from the teacher.

Crano, W. D., and Mellon, P. M. Causal influence of teachers' expectations on children's academic performance: A cross-lagged panel analysis. Journal of Educational Psychology, 70(1): 39-49, Feb. 1978.

In a 4-year longitudinal study of 4,300 British elementary school children, teachers' expectations influenced children's achievement to an extent appreciably exceeding that to which children's performance impinged on teachers' attitudes. Teachers' evaluations of children's social performance affected later achievement to an extent exceeding that attributable to academic expectations.

Elijah, D. Teacher expectations: Determinants of pupils' reading achievement. Reading Improvement, 17(2): 117-21, Summer 1980.

Results of a study of teacher rankings of reading readiness suggested that teacher rankings are as reliable as rankings using the Metropolitan Readiness Tests; the results did not indicate that teacher expectations of student achievement can be altered.

Entwisle, D. R., and Hayduk, L. A. Academic expectations and the school attainment of young children. Report No. 269. Baltimore, Md.: Johns Hopkins Univ. Center for Social Organization of Schools, 1978. ERIC. ED 174 359.

This report investigated how expectations of significant others and feedback provided to children may affect children's achievement and academic self image in the first grade. Multiwave data on several hundred children were gathered. It was found that parents' expectations for their children's performance responded to the IQ of the child, to the child's sex, and to the kindergarten teacher's forecast. Children's performance levels from the first report card to the end of the first grade were highly continuous. This suggests that even the earliest marks children receive are major determinants of future evaluations and that teachers' earliest formal evaluations may play a leading role in determining achievement levels in young children.

Fry, P. S. Process measures of problem and non-problem children's classroom behavior: The influence of teacher behavior variables. British Journal of Educational Psychology, 53(1): 79-88, Feb. 1983.

Results of analyses of 15 teachers and pupil process measure variables suggest that deterioration is noticeable in teachers' interactions, with problem children receiving more negative affect and less sustaining feedback from their teachers over a four month obervation period.

Grapko, M. F. The relation of teacher expectancy and pupil self-assessment to pupil performance. Ontario Ministry of Education, 1980.

Data were collected in 1974 to 1975 on the rating scores of 792 pupils. These pupils were then divided into the following five categories: (1) two concordant categories of those whose ratings and scores on the security test were either high or low, (2) two discordant categories in which the ratings and scores differed markedly, and (3) a control group whose ratings and scores fell within the half standard deviation of the mean. Results showed that students in the discordant categories exhibited less steady growth in academic achievement than those in the concordant categories.

Gurin, P. and Morrison, B. M. Two-way socialization processes in the classroom. Final Report. Ann Arbor: Michigan Univ. Institute for Social Research, 1980. ERIC. ED 198 194.

The major objectives of this study were to examine: the effect of teacher behavior on pupil achievement and feelings on control; how pupil characteristics affect teachers' differential behavior toward different pupils; how the effect of teachers' behavior on pupil varies according to the characteristics of the pupils; how changes in pupils' attitudes and expectancies mediate their changes in academic performance. The sample consisted of 24 teachers and 855 pupils in sixth grade classes in a large metropoliton area. Recognizing weaknesses in the design and analyses the report appears to suggest that teachers and prospective teachers may be discriminating between pupils on the basis of their sex and race as a function of the teachers' own personal beliefs. The authors suggest that the report be used to sensitize school systems and schools of education to make teachers aware of their judgements and behaviors and of the effects on students.

Guskey, T. R. The effects of change in instructional effectiveness on the relationship of teacher expectations and student achievement. Journal of Educational Research, 75(6): 345-49, Jul-Aug. 1982.

To determine whether increasing teachers' effectiveness influences the relationship between teachers' initial expectations for a student and the student's actual performance, data were gathered on intermediate and secondary school teachers who participated in a mastery learning workshop. Correlations between teacher expectations and student performance were lower than those of a control group.

Hughes, J. R. How do you behave? Your non-verbal actions are critical to student motivation. Music Educators Journal, 67(5): 52-53, Jan. 1981.

Explains types of non-verbal cues which teachers can use to express high expectations to their students. Briefly considers the ethics of the intentional use of non-verbal motivation.

Hutslar, S. The expectancy phenomenon. Journal of Physical Education and Recreation, 52(7): 88-89, Sept. 1981.

Teacher expectations of student success or failure greatly affect student performance levels. Four distinct areas of teacher/student interaction are: climate (emotional tone of the interaction); input (new material presented to the student); feedback (the teacher's use of praise and criticism); and output (length of time a teacher spends with a student).

Jeter, T., and Davis, Jr. O. L. Differential classroom interaction in social studies as a function of differential expectations of pupil achievements. Journal of Social Studies Research, 6(1): 1-7, Winter 1982.

Describes a study which investigated whether differences in teacher verbal interactions with students are a function of achievement expectations or sex differences. Ten fourth grade social studies teachers and 120 students were observed using the Brophy - Good dyadic observation system. Results indicated that achievement expectations not sex, influenced teacher interactions.

Jeter, J. Teacher expectancies and teacher classroom behavior. Educational Leadership, April 1973.

Jeter reviews studies completed to date regarding teacher expectations and student achievement. Many of these studies discovered a difference between the treatment of girls and boys by teachers (Davis, Slobodiun, 1967; Sikes, 1971; Lippitt, Gold, 1959). The experimental method introduced by Rosenthal and Jacobson (1968) in which teachers' expectations were manipulated have been completed by Berg, 1970 and Fleming and Anttonen, 1971. Two results of these studies are: teacher expectations may affect student achievement, and teacher expectancy affects teacher behavior and pupil behavior.

Low, L., and Wolfle, L. M. Effects of a first grade teacher on students' achievement in four subsequent years. Elementary School Journal, 83(5): 528-36, May 1983.

Students of a first-grade teacher designated as "effective" on the basis of pupils' short-term gains in achievement did not perform as well as students of other teachers in subsequent elementary grades.

Martinek, T. J. Pygmalion in the gym: A model for the communication of teacher expectations in physical education. Research Quarterly, 52(1): 58-67, March 1981.

Research has shown that teacher expectations not only determine certain types of student performance but also serve to sustain low and high levels of performance. A model shows how teacher expectations are formed, how they are communicated, and how they sustain levels of student performance in physical education.

Minner, S. Expectations of vocational teachers for handicapped students. Exceptional Children, 48(5): 451-53, Feb. 1982.

The study examined three components of the initial expectations of 66 secondary vocational teachers toward mainstreamed educable mentally retarded and learning disabled children. Among findings was that the presence of the labels lowered the initial and behavioral expectations of teachers in the sample.

Munroe, M. J. Effective teacher behaviors as an avenue to enhance the self-esteem of teachers. Paper presented at an Inservice held at Cholla High School, Tucson, 1982. ERIC 228 162.

A discussion of how teachers perceive students and interact with them points out that one characteristic of an effective teacher is a high level of interactive skills. Selected teacher behaviors which enhance the quality of teacher-student contacts are discussed. These include: (1) modeling desirable behavior; (2) critical skills of constructive questioning; (3) creative listening; (4) effective use of time; (5) clarity of teacher presentation; and (6) immediate feedback and encouragement. Consistency in these behaviors, regardless of the ability levels of the students, is identified as a hallmark of effective teaching.

Pandya, H. S. Teacher expectancy related to student performance in vocational education. University Park, Pa.: Pennsylvania State Univ. Department of Agricultural Education, 1978. ERIC. ED 160 890. Microfiche only.

A study was designed (1) to discover the effect of teacher expectation on student performance in the cognitive and psychomotor skills, and (2) to analyze students' attitudes toward teachers because of teacher expectations. Two different instructional units were taught in two comprehensive high schools. Each class was divided into three treatment groups, of which one was the control group. After one month of instruction, students were tested in each subject unit. The findings revealed that the teacher's expectations did change the students' attitudes toward the teacher and subject; however, written comments by the teacher on students' assignments had no significant effect on the level of student achievement.

Parsons, J. E., et al. The effects of teachers' expectancies and attributions on students' expectancies for success in mathematics. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979. ERIC. ED 180 787.

Investigates the effects of teachers' expectancies and patterns of feedback to students on students' expectancies for success in mathematics. Six predictions involving various levels of expectancy, feedback, and sex were made. Initial statistical analysis supported the proposed relation between teachers' expectancies and student expectancies, but many of the predictions were not supported. Only student sex and teachers' expectancies were found to be significant predictor variables by a stepwise regression. Additional statistical procedures were then carried out; among the findings it was indicted that "bright" females were treated differently in each of the two classroom types.

Proctor, C. P. Teacher expectations: A model for school improvement. The Elementary School Journal, 84(4), March 1984.

Proctor presents a model for improving school effectiveness developed by the Connecticut Department of Education. One of the focal points of the success of this model is its recognition of the positive effects of teacher academic expectations on students. A review of the literature regarding teacher expectations and student achievement precedes the discussion of the model.

Reavis, C. A., and Shine, S. C. A study of the effects of prefatory remarks on teacher evaluation, 1977. ERIC. ED 175 811.

A test was made to determine the impact of positive or negative expectations on individuals conducting formal observation of teachers in the classroom for the purpose of evaluation. Two groups of graduate students who were receiving training in classroom observation viewed a video tape of a teacher instructing her class. Group one was given the impression that she had been a fine education student in college; group two was told casually that she had not been outstanding in college. A review of the evaluation ratings by the two groups revealed that their responses to the teacher's classroom behavior were colored by the prefatory remarks they had heard, and that they were inclined to judge her with some positive or negative bias.

Richey, L. S., et al. Teachers' attitudes and expectations for siblings of learning disabled children. Minneapolis: Minnesota Univ. Institute for Research on Learning Disabilities, 1980. ERIC. ED 203 613.

Based on their classroom experiences with learning disabled (LD) non-handicapped students during the school year, 16 third grade teachers were asked to complete rating scales predicting performance of siblings of these students who might be assigned to them in the future. The data suggest that previous experiences with LD children bias teachers' expectations for the younger siblings of these children.

Rosenthal R. The pygmalion effect lives. Psychology Today, Sept. 1973.

In 1968, Rosenthal theorized that students live up, or down, to their teacher's expectation of them. Many educators criticized his results extensively. This article outlines some research studies that have been completed since then in which the pygmalion effect is further substantiated.

St. George, A. Teacher expectations and perceptions of Polynesian and Pakeha pupils and the relationship to classroom behavior and school achievement. British Journal of Educational Psychology, 53(1): 48-59, Feb. 1983.

A study of 90 nine year olds in five ethnically mixed New Zealand classrooms indicated that teachers perceived Polynesian pupils less favorably than White students on dimensions reflecting parent/home factors and academic work skills. Observations of teacher pupil interaction, however, showed no ethnic differences.

Stern, P. R., and Shavelson, R. J. *The relationship between teachers' grouping decisions and instructional behaviors: An ethnographic study of reading instruction*. Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, 1981. ERIC. ED 201 971.

An ethnographic study of small group reading instruction was conducted to learn how teachers' judgements of students' abilities influenced the way they grouped students for reading instruction and the effects of these grouping practices on teachers' planning and instructional behaviors. Two teachers and 20 students were observed over the course of a six-month period in a team taught fifth/sixth grade classroom at a university affiliated elementary school. The results indicated that teachers group students on the basis of their reading ability. Once grouped, the group and not the individual child became the unit for many teaching decisions. Teachers' plans for the low-ability group differed considerably from their plans for the high-ability group. Procedures, decoding and basic comprehension skills, and highly structured assignments were prescribed for the low-ability group, while flexibility in procedures and assignments and an emphasis on sophisticated comprehension skills were stressed for the high-ability group.

Swann, W. B., Jr., and Snyder, M. On translating beliefs into action: Theories of ability and their application in an instructional setting. *Journal of Personality and Social Psychology*, 38(6): 879-88, June 1980.

Instructors were taught that pupil ability was either extrinsic or intrinsic, and were led to believe one pupil possessed high ability and one low ability. Instructors adopted teaching strategies based on the theory of ability they had been taught. Pupils behaved in ways which confirmed teacher expectations.

Weinstein, R. S. and Middlestadt, S. E. *Learning about the achievement hierarchy of the classroom: Through children's eyes*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, April 8-12, 1979. ERIC. ED 170 071.

To investigate how students perceive and interpret teacher behavior toward high and low achievers in elementary classrooms, two measures were constructed: a semistructured interview schedule, and a 60-item teacher treatment inventory which allowed students to rate teacher treatment. Preliminary findings suggest that students do perceive differential treatment by the teacher of male high and low achievers. Additionally, it appears that students read into teacher behavior much beyond what the researchers commonly think they are measuring. It was noted that by not waiting for an answer to a question or by collecting incomplete assignments from students, teachers can limit the opportunites for a student to perform and learn.

4. Teacher's Awareness

Dykman, B. and Reis, H. T. Personally correlates of classroom seating position. Journal of Educational Psychology, 71(3): 346-54, June 1979.

Personality, personal space, and attitudinal measures were administered to high school students. Comparisons of extreme sections of the classroom revealed a significant polarization of student traits on three categories of variables dominated by self-concept and class participation. Differential participation and physical isolation were closely related to self-concept.

Good, T. L. and Brophy, J. E. Looking in Classrooms (3rd Ed.). New York: Harper & Row, 1984.

"Classroom Complexity and Teacher Awareness" is the title of the second chapter in this edition. A section of this chapter presents information about why teachers are not aware of classroom activities as much as they could be. One reason, claim the authors, is that no formal useful system exists to make teachers more aware of their own classroom behavior and the results of that behavior.

Kounin, J. S. Observing and delineating techniques of managing behavior in classrooms. Journal of Research and Development in Education, 4(1), Fall 1970.

Kounin defines "teacher awareness" as "withitness": the ability of the teacher to know what is happening in her/his classroom at all times and to communicate that knowledge to her/his students. This classroom management technique is extremely beneficial, claims Kounin, in that it prevents many inappropriate student behaviors before they begin.

5. Concurrent Tasks Management

Denham, C. H. and Michael, J. J. Teacher sense of efficacy: A definition of the construct and a model for further research. ERQ, 6(1), Spring 1981.

This paper presents a review of the literature on teacher sense of efficacy and other constructs that may offer indirect insight into the phenomenon of teacher confidence and its relationship to student outcomes. A link exists between the ability of the teacher to manage many classroom situations successfully and her/his feelings of efficacy.

Eder, D. The impact of management and turn-allocation activities on student performance. Discourse Processes, 5(2): 147-59. Apr.-June, 1982.

This paper examines the effect of management and turn-allocation activities on students' reading performance. Thirty-two videotaped reading group lessons in a first grade classroom were coded and analyzed using a sociolinguistic approach. The results indicate that the teacher was often oriented toward other members while elicitating information during students' reading turns and that, consequently other members frequently provided the correct word. Furthermore, the teacher's orientation away from the reader appeared to be primarily due to performing management, turn-allocation, and academic activities simultaneously. While opportunities for and incidences of reading turn disruption were found at all group levels, they were twice as frequent in lower ability groups as in higher ability groups.

Good, T. L. & Brophy, J. E. Looking at classrooms (3rd Ed.). New York: Harper & Row, 1984.

Chapter two of this publication is concerned with the complexity of classroom situations and the necessity of the teacher to manage many tasks at the same time. Teachers must not only handle a number of classroom activities, but must also interpret student behaviors continually.

Ornstein, A. C. Do teachers make a difference? Childhood Education, May/June 1983.

Ornstein's review attempts to answer the title question by referring to various studies which have shown that teachers do make a difference: specifically, teacher behaviors make a difference. The author refers to Kounin's term of "overlapping" which means "sustaining an activity while doing something else at the same time." This teacher behavior is a classroom management skill and may lead, in part, to an effective learning situation.

6. Pace of Instruction

Noonan, R. and Wold, H. A comparison of six models of school learning. Evaluation in Education, 7, 1983.

Presents six models of student learning from various researchers including Carroll, Cooley and Lohnes. Bloom's normative model leads to the attainment of mastery learning. Teachers can influence the students' rates of learning through the instructional process presented in this article.

Piechowski, M. M. and Colangelo, N. Developmental potential of the gifted. Gifted Child Quarterly, 28(2), Spring 1984.

This article on the gifted child suggests that it is necessary to pace instruction appropriately for any special needs student. Piechowski and Colangelo imply that teachers must realize the importance of organizing and pacing their mode of instruction to accommodate the learning levels of all their students.

Slavin, R. E. and Karweit, N. L. Cognitive and affective outcomes of an intensive student team learning experience. Journal of Experimental Education, 50(1), Fall 1981.

Three methods of pacing instruction are presented. These methods involve student teams of fourth and fifth-grade students. Results indicated that student team learning has positive influences on students regarding friendships, self-esteem, language progress and reading achievement.

7. Classroom Management

Bechtol, W. and Anderson, D. Preventative discipline: A review of the literature. Small School Forum, (2), Winter, 1981.

Presents a literature review citing studies completed by Kounin, Evertson and Anderson and others. These studies suggest that the key to classroom problem management is preventative discipline strategies. The authors offer six strategies a teacher may employ to accomplish problem management.

Borg, W. R. and Ascione, F. R. Classroom management in elementary mainstreaming classrooms. Journal of Educational Psychology, 74(1): 85-95, Feb. 1982.

A total of 39 elementary school teachers in mainstreaming classrooms were randomly assigned to two groups. Experimental teachers were trained in the Utah State University Classroom Management Program whereas the control teachers were trained in a similar program of the same duration that covered different teaching skills. The student sample consisted of 322 students selected from participating classrooms and included subsamples of handicapped and minority students. Analysis of covariance of 16 teacher behaviors found that experimental teachers were superior to control teachers in nine behaviors. Experimental students obtained significantly more favourable postreatment means than control students on-task, mildly deviant, and seriously deviant behavior. Most comparisons between handicapped and racial subgroups were not significant.

CEDR. Centre on Evaluation, Development, and Research. Effective classroom management. (Hot Topics Series). Bloomington, in: CEDR, Phi Delta Kappa, 1982-83.

Contains research articles as well as articles that provide practical information for teachers who wish to evaluate and improve their management skills.

Curwin, R. L. and Mendler, A. N. High standards for effective discipline. Educational Leadership, 41(8), May 1984.

Clearly defined expectation and limits are congruent with an effective classroom management system. Curwin and Mendler suggest the use of a "social contract" as one method of maintaining classroom control. This contract includes such items as non-negotiable teacher/school rules, negotiable rules, consequences if rules are broken, as well as student-developed rules. Students benefit from such a system because it allows them the opportunity to take responsibility upon themselves.

Emmer, T. et al. The first weeks of class . . . And the rest of the year. Research and Development Report No. 6005. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979. ERIC. ED 175 861.

Classroom observation of 28 third-grade teachers illustrated the management and planning strategies that differentiate effective teachers from less effective teachers. Effective managers communicated a workable system of rules and procedures, monitored students carefully, and were consistent in treating inappropriate behavior. Less effective managers did not establish their credibility at the outset of the academic year and were unpredictable in both their feedback and discipline techniques. Discipline and organizational procedures were delineated during the first weeks of the school year by the more effective teachers.

Evertson, C. M. Differences in instructional activities in high and low achieving junior high classes. Research and Development Report No. 6106. Austin: Texas Univ. Research and Development Center for Teacher Education, 1980. ERIC ED 195 546.

This paper focuses on the strategies and behaviors in classrooms of teachers who are teaching similar subject matter content to classes of differing ability levels. Higher ability classes had teachers who: (1) described and presented objectives and materials more clearly; (2) provided content and reasonable work standards related to student interests and needs; (3) were consistent in dealing with student behavior; (4) were receptive to student input; (5) nurtured affective skills; and (6) maintained a task-oriented focus. A comparison of the two low achieving classes suggests that there are optimal ways of providing instruction to increase productive learning time.

Galluzzo, G. R. Changing teacher performance with protocols. Paper presented at the annual meeting of the American Educational Research Association, New York, 1982. ERIC. ED 215 973.

This study examined whether selected protocol materials in classroom management, used in inservice courses, would bring about long-term significant changes in teachers' classroom performance. Fifteen teachers participated in the study by taking an inservice course on classroom management and discipline. The first module consisted of group alerting behaviors and the second module demonstrated teacher behaviors that encourage "withitness". The subjects also practised identifying the specific behaviors on transcripts of actual classroom interaction and participated in discussions. Teachers were observed in their classrooms immediately following completion of the modules, and two observations were made three and six weeks later. Findings indicated that, while the teachers used newly learned behaviors immediately following the training sessions, long-term changes in behavior were difficult to determine.

Goldstein, J. M. and Weber, W. Teacher managerial behaviors and student on-task behavior. Paper presented at the annual meeting of the Southwest Educational Research Association, Houston, 1979. ERIC. ED 178 484.

The hypothesis that teacher managerial behavior may have a greater effect then teacher instructional behavior on ultimate student achievement is supported through the explication of seven major approaches to class management. Forms of teacher managerial behavior examined are: (1) authoritarian; (2) behavior modification; (3) common sense; (4) group process; (5) instructional; (6) permissive; and (7) socio-emotional climate. The relationship between these seven clusters of teacher behaviors and student on-task behaviors are extended to infer causality between the teacher behaviors and the student's academic achievement levels.

Good, T. L., et al. Teaching mathematics in high and low SES classrooms: An empirical comparison. Journal of Teacher Education, 29(5): 85-90, Sept.-Oct. 1978.

Low income classrooms demand that teachers supervise and monitor students' seatwork actively and control private interactions with students. Praise and a relaxed climate are more important in low than in high income settings.

Harvey, K. D. Classroom management: An annotated bibliography. 1980. ERIC. ED 198 075.

This annotated bibliography cites reference materials that will assist the classroom teacher in conceptualizing a comprehensive approach to classroom management.

Lockavitch, Jr. J. F. Seating arrangement and classroom behavior: A simple but sometimes overlooked method for classroom control, 1979. ERIC. ED 179 014.

This paper discusses the importance of environmental factors -- namely, classroom seating -- to classroom management. A specific incident is discussed, whereby disruptive behavior developed in students because of the spatial separation of their desks from the teacher's desk. Solutions to the seating problem are offered in the text and in figures drawn for use by the reader. The paper concludes that effective use of the environment can greatly assist teachers in keeping their classes under control.

National School Boards Association. Student discipline: Practical approaches, 1979. ERIC. ED 177 691 Microfiche.

This report covers trends in discipline policies and policy-making and alternative and innovative school programs designed to diminish behavioral problems in the classroom. The appendix offers sample discipline policies from three different school districts.

Project T.E.A.C.H: Teacher effectiveness and classroom handling. Performance Learning Systems, 446 Old Hook Road, Suites 25-26, Emerson. New Jersey. 07630. 1974 (A training course under the auspices of the Alberta Teachers' Association).

Project T.E.A.C.H. is a course on classroom management techniques offered through the ATA. This course was introduced in Alberta by Performance Learning Systems, a New Jersey based educational organization. The course involves three major areas of classroom management technique development: a) concentration on learning the students' agenda, b) concentration on overcoming resistance, and c) concentration on problem solving with decision-making control.

Rounds, T. S., et al. An analysis of teachers' rule systems at a successful school verification inquiry, Volume IV. Ecological perspectives for successful schooling practice. San Francisco: Far West Lab. for Educational Research and Development, 1981. ERIC. ED 230 498.

Rule systems established in successful elementary school classrooms are analyzed. In chapter 2, the sample, methodology, and data analysis procedures used in the rules analysis are described. Also discussed are data collection procedures, including narrative descriptions and classroom observations. Data analysis methodology, including identification of rules in each classroom, classification of rules, and consonance of rules across classrooms, is detailed. Two appendices present instructions to teachers coding classroom rules and charts of teachers rules.

Strother, D. B. Practical applications of research. Phi Delta Kappan, 66(10), June 1985.

Reviews a number of research studies (Kounin, 1970; Emmer, et al, 1980; Clark and Yinger, 1980) and concludes that these researchers have identified ways of creating positive, effectively managed classroom environments that facilitate learning. Because no single approach to planning is sufficient, the researchers recommend that teachers adopt a comprehensive, data-based, selective approach to classroom management.

Tobin, K. G. and Copie, W. Student engagement in middle school science classrooms. Paper presented at the annual meeting of the Southeastern Association for the Education of Teachers of Science, Orlando, Fl., 1980. ERIC. ED 194 522.

Thirteen junior high school science classes were observed to determine how variation in classroom management techniques related to variation in pupil engagement rates, and how rates and types of teaching behaviors related to rates and types of pupil engagement. The relationship between teacher behaviors of attending, recalling, collecting, comprehending, quantifying, planning, and generalizing and pupils' responsive engagement rates was documented. Higher pupil engagement rates were observed in classrooms where appropriate classroom behavior was maintained; the teacher reinforced and encouraged the efforts of learners to maintain involvement; and where teaching methods were appropriate for lesson objectives, pupils cognitive ability, and the classroom environment.

Virtuli, S. and Phelps, C. Classroom transitions. Childhood Education, 57(2): 94-96, Nov-Dec. 1980.

Recognizing that inadequate transitions cause classroom disruption, the authors offer several approaches to achieving smooth transitions from activity to activity for preschool children.

Weber, W. A. et al. A mini-instructional system for increasing teacher classroom management competence. Paper presented at the annual meeting of the Association of Teacher Educators, Orlando, 1979. ERIC. ED 170 273.

The findings from two studies (Pre-Pose and Matched Pairs) suggest that the mini-instructional system that was designed to provide teachers with training in the analytic-pluralistic approach to classroom management did have a very positive impact on those teachers who received this training. Specifically, findings suggest that the training is effective in fostering those teacher attitudes and teacher managerial behaviors thought to be related to desirable student outcomes.

Worsham, M. E., and Evertson, C. M. Systems of student accountability for written work in junior high school English classes. R & D Report No. 6105. Austin: Texas Univ. Research and Development Center for Teacher Education, 1980. ERIC. ED 196 008.

A study was conducted to determine the relationship between effective classroom management and the manner in which teachers assign and hold students responsible for written work in junior high schools. Seven more effective and seven less effective teachers were studied. The findings reveal that the more effective managers (1) were more clear and specific with format requirements for written work, (2) had more consistent and efficient procedures for communicating assignments, (3) had more systematic procedures for regularly supervising and encouraging students as they worked, (4) stressed careful and consistent checking and turning in of classroom and homework assignments, and (5) were more consistent in the use and manner of feedback to students about assignments. The results suggest a definite positive relationship between comprehensive accountability systems for written work and effective classroom management. (Summaries of two teacher accountability systems are appended).

8. Feedback to Pupils

Anderson, L. M., Evertson, C. M. and Emmer, E. T. Dimensions in classroom management derived from recent literature. Journal of Curriculum Studies, 12(4), 1980.

This article presents results from a study of classroom management conducted employing third grade teachers in low socio-economic schools. The authors suggest that there is a correlation between good classroom managers and the amount of student engaged time. One behavior that was demonstrated continuously by effective classroom teachers was that of providing systematic feedback to students about their progress. This reminded the students of their accountability and acted as a reminder to teachers as well.

Bardwell, R. Feedback: How does it function? Journal of Experimental Education, 50(1): 4-9, Fall 1981.

A study of feedback delay, expectation, and development was conducted in grades four, six, and eight, to assess whether feedback on a school related learning task serves an informational or reinforcing function. Results indicate that feedback serves an informational function and delayed feedback facilitates retention, contrary to reinforcement theory rules.

Beatty, M. J. and Behnke, R. R. Teacher credibility as a function of verbal content and paralinguistic cues. Communication Quarterly, 28(1): 55-59, Winter 1980.

Points out that teachers frequently emit nonverbal messages that contradict their verbal messages. Isolates vocal cues (special characteristics of the communicator's voice) as the nonverbal behavior for study. Examines the interaction of vocal cues and verbal messages with respect to impact on teacher credibility.

Bloom, R. B. and Bourdon, L. Types and frequencies of teachers' written instructional feedback. Journal of Educational Research, 74(1): 13-15, Sept-Oct. 1980.

Because many teachers demonstrate limited use of knowledge of feedback strategies positively associated with student achievement, providers of preservice and inservice teacher education should review feedback research and instruct teachers on its effective use.

Brophy, J. E. Advances in teacher research. The Journal of Classroom Interaction, Winter 1979.

Brophy's literature review presents many studies that have attempted to define effective teaching. The elements of direct instruction form a cluster of behaviors and one of the behaviors is feedback to pupils. Rosenshine (1978), Medley (1977) and Borich (1977) outline the importance of corrective and individualized feedback on a continual basis.

Brophy, J. E. and Good, T. L. Teacher behavior and student achievement. In M. Wittrock (Ed.), Handbook of research on teaching (3rd Ed.). New York: Macmillan 1985.

Chapter eleven of this book presents studies and conclusions comparing teacher behavior and student achievement. In particular, one such study conducted by Good and Grouws (1977) showed that in higher achieving classes the teacher gave feedback to students regarding academic progress, behavior and statement clarifications on a continual basis.

Clifford, M. M. The effects of quantitative feedback on children's expectations of success. British Journal of Educational Psychology, 48: 220-6, June 1978.

A pair of studies with first, third, and fifth graders supports the prediction that concrete, quantitative feedback, as opposed to qualitative comments, increases the validity of children's expectations of their level of performance.

Edwards, C. H. and Surma, M. The relationship between type of teacher reinforcement and student inquiry behavior in science. Journal of Research in Science Teaching, 17(4): 337-41, July 1980.

Determines the effect on inquiry of different contingencies of reinforcement. Classes of biology students were exposed to one of four treatments: verbal reinforcement and mimicry; using student ideas as reinforcers; using special privileges as reinforcers; and no reinforcement. Results include verifications that verbal reinforcement amd mimicry reduce inquiry.

Hannafin, M. J. The effects of systematized feedback on learning in natural classroom settings. Educational Research Quarterly, 7(3): 22-29, Fall 1982.

The effect of systematized feedback on mathematics performance in natural classroom settings was examined. Three sixth grade classes served as subjects during the 12-week study. A 25-item computation post test was administered. Results confirm the effectiveness and practicality of comprehensive feedback programs in natural classroom settings.

Hodges, D. L. How to improve your students' learning through practice exercises and feedback, 1980. ERIC. ED 220 150.

Research indicates that students' learning performance can be improved through techniques of "action-feedback-correction." The benefits of this technique include individualized instruction at low cost, a clear communication of learning objectives, improved student learning, and better monitoring of student progress.

Hoffman, J. V. Feedback to oral reading miscues. Parts I & II. Final Report, 1981. ERIC. ED 227 455.

The first two parts of a three-part final report examined the nature, characteristics, and effects of verbal feedback to student reading miscues. The major portion of Section II contains comprehensive summaries of three major and several follow-up studies.

Hoffman, J. V. Feedback to oral reading miscues. Part III. Final Report, 1982. ERIC. ED 227 456.

This volume contains articles and unpublished manuscripts that have been written as part of this project. The topics include: (1) teacher verbal feedback during reading instruction: (2) teacher verbal feedback to the reading miscues of high and low achieving students; (3) characterizing teacher feedback to student miscues during oral reading instruction; (4) training for feedback to an oral reading analysis system; (5) inservice and preservice teacher feedback to student miscues; and (6) the effects of differentiated patterns of verbal feedback to miscues on word identification strategies and success.

Oien, F. M. Teacher directed behavior toward individual students, 1979. ERIC. ED 175 826.

A study of five teachers and 316 junior high school physical education students revealed an unequal distribution of positive reinforcement teacher behavior among individual students. Male students were found to receive a significantly larger amount of encouraging teacher attention than did female students in 18 out of the 21 classes sampled. Teacher behavior patterns may reflect the teacher's situational reaction to class chemistry. Effective individualized inservice programs to aid in overcoming personal bias detrimental to the classroom situation are needed.

Smith B. D. Responding effectively to incorrect answers. Social Studies, 72(2): 56-60, Mar-Apr. 1981.

Suggests that teachers should view corrective feedback as a constructive reaction to students who answer questions incorrectly and presents examples of how corrective feedback techniques can be used in social studies classes. Stresses that, in order to benefit from corrective feedback, students must focus their attention on the cognitive information presented.

9. Time on Task

Anania, J. The influence of instructional conditions on student learning and achievement. Evaluation in Education, 7, 1983.

This research study includes literature review on instructional conditions that affect student achievement. One of these conditions is quality learning time: student actual time-on-task. Studies completed by Bennett report that active participation of students in the same classroom ranged from 20% to 100%. High achieving students, observed Good and Beckerman, averaged 76% time-on-task whereas low-achieving students averaged 64% active learning time.

Anderson, L. W. Learning time and educational effectiveness. Reston, Va.: National Association of Secondary School Principals, 1980. ERIC. ED 210 780. Microfiche only.

The author cites evidence that time-on-task is related to student achievement and describes two instructional approaches that have been associated with high levels of time-on-task. The first of these is mastery learning, which includes nine key elements, and the second, direct instruction has ten key elements. Central to both is the need for clearly defined goals, communication of expectations to students, and careful monitoring of student progress.

Archambault, Jr. F. X., et al. The classroom activities log: A personalized record of a child's school day as recorded by his/her teacher. Paper presented at the annual meeting of the National Council on Measurement in Education, San Francisco, 1979. ERIC. ED 178 609.

The development and validation of an instrument designed to measure the quantity of types of instruction delivered to individual students is described. The Classroom Activities Log (CAL) is a teacher-complete record of students' instructional experiences. Some of the features of CAL are: (1) student focus; (2) limited number of variables; (3) minimal teacher training and costs; (4) availability of data on individual students' daily activities; and (5) ease of scaling.

Arlin, M. Teacher transitions can disrupt time flow in classrooms. American Educational Research Journal, 16(1): 42-56, Winter 1979.

Disruptive pupil behavior increased during teacher-initiated transition time as opposed to non-transitional time. Procedures for structuring transitions to increase time-on-task and maintain smoothness and momentum are described, and teachers' conceptions of time and classroom time flow are discussed.

Bloom, B. S. A new direction in education research: Alterable variables. Phi Delta Kappan, February 1980.

Bloom outlines three levels of learning time: allotted time, available time, and pupil engaged time. Most studies define student time-on-task as the proportion of the classroom period the student was engaged in direct task related behavior. Student achievement, interest and attitude in the subject relates positively to time-on-task.

Bloom, B. S. Time and learning. American Psychologist, September 1974.

Bloom cites various studies that correlate student achievement to quality educational time. The 1966 Coleman Report concluded that students in "more favored" schools attained in 8 years what students from "less favored" schools gained in 12 years, and yet all the students were attending school the same number of hours per day and days per year. Research conducted by Bloom resulted in the following: the multiple correlations of cognitive, affective and quality of instruction with achievement are .85 or higher; the multiple correlations of the preceding variables with time on task is about .75. Therefore, quality engaged time (time-on-task) is very important to student learning.

Comparison and identification. Time leader's guide. Basic skills instructional improvement program. Philadelphia, Pa.: Research for Better Schools, Inc., 1980. ERIC. ED 193 201.

The improvement of student engaged time leads to instructional improvement. This leader's guide teaches program participants how to: (1) compute student engaged time; (2) compare information collected with research findings; (3) identify opportunities for improvement; (4) set tentative goals for student engaged time, allocated time, and engagement rate. Instructional materials to be used in this program are included.

Guide, F., et al. Academic anxiety, time-on-task and achievement: A structural model. Paper presented at the annual meeting of the American Educational Research Association, Montreal 1983. ERIC. ED 228 290.

This study tested the hypothesis that anxiety debilitates students' attention span or time-on-task thus negatively affecting their achievement. Two instruments measured each of the three constructs. A structural equation model tested the association among the variables. The results confirmed the hypothesized negative association between anxiety and achievement and the positive relation between time-on-task and achievement. This finding is taken as evidence for the importance of time-on-task as a mediating variable between academic anxiety and reading achievement.

Kuceris, M. Time on the right task can boost student success. Executive Educator, 4(8): 17-19, 26, Aug. 1982.

To improve test scores and instructional quality, school districts in New Brunswick (New Jersey) and Adams County (Colorado) implemented programs to increase student time on task. Administrators introducing time on task programs should involve teachers and principals in planning, and provide support for necessary changes.

Kuceris, M. and Zakariya, S. (Eds.). Time on task: Using instructional time more effectively. Arlington, Va.: American Association of School Administrators, 1982. ERIC. ED 221 924.

According to this publication, a school's most effective tool in encouraging student success may be its control over the time the student spends working on goal-oriented learning activities — that is, time on task. This document is intended to help school administrators understand the effects of their decisions on students' learning time and improve those decisions. An appendix provides suggestions on how to develop a program to increase time on task within a school district and includes a step-by-step checklist and observation forms.

McLaughlin, T. F., et al. A timer game: Effects for on-task behavior and generalization for academic behavior for an entire special education class. Contemporary Educational Psychology, 4(2): 172-74, April 1979.

This investigation determined if a timer, token reinforcement, and consequences for on-task behavior could increase academic output as well as on-task behavior of an entire special education class. The technique was effective in increasing both on-task behavior and generalizing its effects to academic output even 5, 15, or 25 days later.

Probst, D. A study of time on-task in three teachers' classrooms using different instructional modes. Report from the Project on Studies of Instructional Programming for the Individual Student. Madison: Wisconsin Univ. Research and Development Center for Individualized Schooling, 1980. ERIC. ED 196 905.

This study investigated differences occuring in student time utilization in three teachers' classrooms who used different instructional modes; large group, small group, and individualized. The subjects were 60 eighth grade students from a large urban middle school. Results of comparisons performed on time on task indicated that high and middle achievers spent significantly more time on task than low achievers.

Strother, D. B. Another look at time-on-task. Phi Delta Kappan, June 1984.

Karweit stated that giving students more time to study will not necessarily lead to increased learning; the issue is real or actual engaged task time. Strother suggests that in order to increase student learning, schools should "increase the proportion of active learning time within the time that is allowed for learning." The author offers several recommendations regarding organization of students, curriculum and teacher time that may prove beneficial to the teaching situation.

10. Enthusiasm

Allen, E. K. A study of the relationship of teacher enthusiasm to salient, selected variables influencing achievement in the vocational laboratory. Final Report. Philadelphia: Temple University, 1979. ERIC. ED 179 781.

Student variables studied in relationship to teacher enthusiasm were (1) attendance; (2) interest in school and in a particular subject; (3) educational motivation; and (4) student rating of vocational teachers. Forty-three teachers submitted two fifteen minute videotaped teaching sessions which were rated by trained observers. It was concluded that no significant correlation exists between teaching enthusiasm and the selected factors with the exception of student rating of instructors. The relationship between teacher enthusiasm and student achievement was not studied.

Bettencourt, E. M. et al. Effects of training teachers in enthusiasm on student achievement and attitudes. Paper presented at the annual meeting of the American Educational Research Association, Boston, 1980. ERIC. ED 194 592.

Seventeen first-year elementary teachers were randomly assigned to either an enthusiasm training treatment or a no training treatment. All teachers then taught a two week controlled unit in mathematics to their classes. Trained teachers increased significantly on eight indicators of enthusiasm compared with untrained teachers. However, students of trained and untrained teachers did not differ either on the achievement post-test or on the attitude scales. Further research is suggested.

Caruso, V. M. Teacher enthusiasm behaviors reported by teachers and students. Paper presented at the annual meeting of the American Educational Research Association, New York, 1982. ERIC. ED 217 038.

Enthusiastic and unenthusiastic teacher behaviors were identified by teachers and students in English and physical education classes. Participants agreed on five of the highest-ranked enthusiastic behaviors: participation, humour, encouragement, praise and momentum. Behavioral categories differed between teachers of English and physical education; behaviors emphasized by teachers and students in English focused on content delivery and classroom atmosphere, while teachers and students in physical education stressed personal interaction skills.

Gillet, M. and Gall, M. The effects of teacher enthusiasm on the at-task behavior of students in elementary grades, 1980. ERIC. ED 202 823.

This study tested the causal link between teacher enthusiasm and student achievement, using teaching as an independent variable and at-task behavior as a dependent variable in mathematic classes from the first to sixth grades. Experimental and control group teachers were video taped both before and after the two week training with observers recording pupils' at-task behaviors.

Teachers who had enthusiasm training showed a significant increase in level of enthusiasm, and that their pupils had a significantly higher at-task performance under both direct and indirect teacher influence.

Good, T. L. and Brophy, J. E. Looking in classrooms (3rd Ed.). New York: Harper & Row, 1984.

Good and Brophy define enthusiasm as "the extent to which the teacher displays interest, vitality, and involvement in subject and instruction" (p. 81). Costin, Greenough and Mengas (1971) state that even college students appreciate an enthusiastic presentation of curriculum and rate such instructors highly. The authors emphasize the fact that teachers are models. If the teacher is enthusiastic most of the students will display this behavior as well. Enthusiastic students achieve at higher levels because they are more attentive (Rosenshine, Furst, 1973).

Larkins, A. G. and McKinney, C. W. Two studies of the effects of teacher enthusiasm on social studies achievement of seventh grade students. Theory and Research in Social Education, 10(1): 27-41, Spring 1982.

Two studies examined the effect of teacher enthusiasm on the social studies achievement of seventh grade students. The first study was to determine whether three levels of teacher enthusiasm would produce corresponding differences in social studies achievement. The second study attempted to replicate the first.

McKinney, C. W. and Larkins, A. G. Effects of high, normal, and low teacher enthusiasm on secondary social studies achievement. Social Education, 46(4): 290-92, April 1982.

Five studies by the authors on the effects of teacher enthusiasm on secondary studies achievement are described. The results indicate that student not only can perceive differences in teacher enthusiasm, but that they prefer higher levels of enthusiasm and appear to learn more from lessons taught enthusiastically.

Rosenshine, B. Enthusiastic teaching: A research review. School Review, 78(4), August 1970.

This research review presents information regarding the relationship between pupil achievement and enthusiasm. It also specifies the behavioral components of enthusiasm. High and low inference, experimental and correlational studies are included. Collectively, the research defines an enthusiastic teacher as one who employs movements, gestures, variations in voice, and eye contact. Teachers must be aware of the distracting quality of over-animated lessons.

11. Clarity of Instruction

Cruickshank, D. R. Applying research on teacher clarity. Journal of Teacher Education, XXXVI(2): 44-47, March-April 1985.

Selected findings from the research on teacher clarity is highlighted. Cruickshank concludes that clarity is an important teacher attribute and that it relates, among other things, to learner achievement, learner satisfaction, and learner perception of teacher effectiveness. As such, it is recommended that clarity be used as one criterion in teacher evaluation.

Cruickshank, D. R., et al. Clear teaching: What is it? British Journal of Teacher Education, 5(1): 27-33, January 1979.

Three studies attempting to define teacher clarity are described. In each case students are asked to rate teacher behaviors in terms of clear or unclear behaviors. The results of each study indicate four categories of characteristics of teacher clarity: (1) assesses student learning; (2) provides student opportunity to learn; (3) uses examples; and (4) reviews and organizes.

Hines, C. V., et al. Measures of teacher clarity and their relationships to student achievement and satisfaction. Paper presented at the Annual meeting of the American Educational Research Association, New York, 1982. ERIC. ED 222 531.

The relationship between teacher clarity (as reflected by both low-inference and high-inference measures) and the student outcome measures of achievement and satisfaction were examined. Data on 32 preservice teachers, were provided by trained observers using the Teacher Clarity Observation Instrument as well as questionnaires completed by teachers and students. It was shown that there is a positive, highly significant, and substantial relationship between clear teaching behavior and student achievement and satisfaction when assessed within the context of a peer teaching laboratory situation.

Kennedy, J. J., et al. Additional investigations into the nature of teacher clarity. Journal of Educational Research, 72(1): 3-10, Sept-Oct. 1978.

This article reports on research instruments administered to junior high school students from Australia, Ohio, and Tennesse studying student responses to descriptions of selected teacher behaviors relating to teacher clarity. Two primary and two secondary factors that relate to teacher clarity are identified.

Land, M. L. and Denham, A. Effect of teacher clarity on student achievement. Paper presented at the annual meeting of the Southwest Educational Research Association, Houston, 1979. ERIC. ED 177 127.

The results of the experimental effect of low-inference teacher clarity variables on achievement and on retention were determined by means of a randomized control group, posttest only, basic design. Members of an introductory education class viewed video tapes of lessons containing either high or low teacher clarity variables. Subjects who took a 30-item criterion test immediately after the viewing were compared to subjects who took a "delayed achievement" criterion test one week after veiwing the tapes. Significant differences resulted for the main clarity effect and for the main effect of time-of-achievement. The interaction effect between clarity and time-of-achievement was not significant, i.e., there was no significant differential effect of level of teacher clarity on student retention.

Smith, L. R. Teacher clarifying behaviors: Effects on student achievement and perceptions. Journal of Experimental Education, 55(3): 162-169, 1985.

High school social studies students (N=448) were each assigned to one of 16 groups defined by possible combinations of two teacher uncertainty conditions (uncertainty vs. no certainty), two teacher "bluffing" conditions (bluffing vs. no bluffing), two lesson discontinuity conditions (discontinuity vs. no discontinuity), and two lecture notes conditions (notes handouts vs. no notes handouts). Each group was presented a lesson about the geography, politics, history, and economy of Botswana. The lessons were the same except for variations in the four conditions stated above. After the lesson, each group was tested on comprehension of the material, and then each group completed a lesson evaluation. This experimental study revealed that: teacher uncertainty negatively affected achievement; notes handouts positively affected achievement; and both teacher bluffing and lesson discontinuity negatively affected student evaluation of the lesson.

Land, M. L. and Smith, L. R. Low-inference teacher clarity variables: Effects on student achievement. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979. ERIC. ED 179 499.

A description is given of three studies on the effects of teacher clarity upon student achievement. Three low inference variables of teacher clarity -- vagueness terms, mazes, and additional unexplained content — were selected for study. Eight lessons, scripted to be conducted by one teacher, each containing examples of lack of clarity, were observed. The results of these studies indicated a cause-effect relationship between teacher lack of clarity and student achievement. The effects in absolute terms, however, were small.

McCaleb, J. L., and White, J. A. Critical dimensions in evaluating teacher clarity. Journal of Classroom Interaction, 15(2): 27-30, Summer 1980.

An analysis of studies on teacher clarity reveals five components: (1) understanding; (2) structuring; (3) sequencing; (4) explaining; and (5) presenting. Three additional dimensions to be considered are rater qualifications, teacher dynamism, and student opportunity to learn.

Rosenshine, B. V. and Furst, N. Research on teacher performance criteria. In B. Othanel Smith (Ed.), Research in teacher education: A symposium. Englewood Cliffs, New Jersey: Prentice-Hall, 1971.

Rosenshine and Furst discuss the problems involved in defining clarity. However, studies that have been completed employing the researchers' operational definitions resulted in correlations between clarity and student achievement of .34 to .65.

Smith L. R., and Bramblett, G. H. The effect of teacher vagueness terms on student performance in high school biology. Journal of Research in Science Teaching, 18(4): 353-60, July 1981.

Analyzes a study which examined the effects of teacher vagueness on comprehension of high school biology students (N=48) regarding the vascular system of angiosperms. Includes the finding that teacher vagueness terms significantly affect student achievement and student perception of lesson effectiveness.

Smith, L. R. and Cotten, M. L. Effect of lesson vagueness and discontinuity on student achievement and attitudes. Journal of Educational Psychology, 72(5): 670-75, October 1980.

For seventh-grade mathematics students, lesson discontinuity and teacher vagueness terms significantly affected student achievement, and the interaction between continuity and vagueness was significant. Vagueness terms significantly influenced student perception of lesson effectiveness.

Smith, L. R., and Land, M. L. Low-inference verbal behaviors related to teachers clarity. Journal of Classroom Interaction, 17(1): 37-42, Winter 1981.

Two low-inference teacher clarity variables, vagueness terms and mazes, are discussed in terms of their effect on student achievement and on student perception of lesson effectiveness. Results indicate that high frequencies of teacher vagueness terms inhibit student achievement and cause students to perceive the lesson as ineffective.

12. Task Oriented/Businesslike Orientation

Brophy, J. E. and Good, T. L. Teacher behavior and student achievement. In M. Wittrock (Ed.), Handbook of research on teaching (3rd Ed.). New York: Macmillan, 1985.

Brophy and Good define businesslike and task-oriented teachers as those who "operated their classroom as learning environments, spending most time on academic activities." In research completed by the Texas Teacher Effectiveness Study, there exists a high correlation between student achievement and teacher businesslike behavior.

Gabrys, R. E. An analysis of the influence of a training intervention for business-like behavior on the business-like behavior and level of warmth of preservice elementary teachers. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1979. ERIC. ED 171 681.

This study was designed to see if preservice elementary teachers having undergone a training intervention on business-like behavior can significantly increase their observable level of business-like behavior and maintain the level of increase ten weeks after training. The observed level of warmth was also monitored in relationship to the training intervention . The training intervention included classroom instruction, identification, and observation of business-like descriptors in classroom settings, role playing, peer teaching, and micro teaching. Significant results were obtained relative to the intervention, and non significant correlations found between business-like behavior and warmth.

Larson, R. Teacher performance evaluation - What are the key elements? NASSP Bulletin, February 1984.

Larson's brief opinion on teacher evaluation mentions several research studies completed on teacher effectiveness. One such study conducted in Iowa found that businesslike, task-oriented teachers achieved the greatest gains over a ten month period as indicated by the Iowa Test of Basic Skills.

Rosenshine, B. and Furst, N. Research on teacher performance criteria. In B. Othanel Smith (Ed.), Research in teacher education: A symposium. Englewood Cliffs, New Jersey: Prentice Hall, 1971.

Rosenshine and Furst mention several studies which have established that a positive relationship exists between student achievement and teachers' business-like/task oriented behaviors. The authors suggest a high correlation is apparent because "you get what you teach for". Therefore, teachers with a high achievement focus develop high achieving students.

Smith, L. R. Task-Oriented lessons and student achievement. Journal of Educational Research, 73(1): 16-19, Sept.-Oct. 1979.

A high degree of classroom activity relevant to the lesson content positively influenced achievement in high school algebra lessons.

13. Variability of Instruction

Bailey, G. An evaluator's guide to diagnosing and analysing teaching styles. NASSP Bulletin, February 1984.

Bailey's article presents definitions and examples of methodologies and instructional strategies. The author gives no empirical evidence but suggests that a teacher who employs a variety of instructional approaches is less likely to bore students; that students appreciate and enjoy changes in instructional presentation and as a result will be more attentive.

Rosenshine, B. and Furst, N. Research on teacher performance criteria. In B. Othanel Smith (Ed.), Research in teaching education: A symposium. Englewood, Cliffs, New Jersey: Prentice Hall, 1971.

Rosenshine and Furst present empirical data that form a positive association between variety of instructional materials, variety of tests and variety of teaching devices with student learning. Lea (1964) discovered that those teachers who employed more variety in their presentations had higher achieving students. Correlations ranging from .24 to .54 were achieved by Walberg (1969), Fortune (1967) and Torrance and Parent (1966) regarding variety in instruction and student achievement.

14. Flexibility

Brophy, J. E. and Good, T. L. Teacher behavior and student achievement. In M. Wittrock (Ed.), Handbook of research on teaching (3rd Ed.). New York: Macmillan, 1985.

Brophy and Good discuss flexibility as a teacher's behavior with regard to altering the presentation and content depending upon classroom variables. "Tailoring techniques to the situation" correlates positively with student attitude and achievement according to studies by Soar (1968) and Flanders (1970).

Martin, W. R. Teacher behaviors - Do they make a difference? A review of the research. Kappa Delta Phi Record, December 1979.

Martin's article reminds educators of the student's affective domain and the teacher's behavior in the affective domain. Aspy, et al found that students taught by teachers high in genuineness, respect and empathy showed a reading gain higher than those taught by teachers displaying these behaviors on a lower level. In order for a teacher to be flexible, one should know her/his pupils beyond their academic achievement level. Effective teachers will adjust to a variety of instructional situations, objectives and a variety of socio-economic backgrounds so that they can assist pupils to significant learning and personal growth.

Pupil's Behavior

15. Understanding of Instructional Goals

Good, T. L. and Brophy, J. E. Looking in classrooms (1st Ed.). New York: Harper and Row, 1973.

The level of student understanding of instructional goals is related to many teacher behaviors particularly teacher clarity, direct instruction, and teacher expectations. Students will have difficulty completing classroom tasks if the teacher has not been clear as to what those tasks should be. The goals of the daily lesson, unit and yearly content should be clear to the teacher, and the teacher must relate these goals adequately to the pupils.

16. Teacher Centred/Direct Instruction

Becher, R. M. Teacher behaviors related to the mathematical achievement of young children. Journal of Educational Research, 73(6): 336-40, July-Aug. 1980.

For four- and five-yearold lower socioeconomic status children learning basic mathematics, more indirect teacher behavior and the active involvement of the student in the learning process are significantly more effective in facilitating student achievement than is a direct instruction/passive reception learning mode.

Becker, W. C. Symposium on direct instruction: The Follow Through data show that some programs work better than others. Paper presented at the annual meeting of the American Educational Research Association, Toronto, 1978. ERIC. ED 173 363.

The National Evaluation significance data on the Follow-Through Planned Variation Experiment show that direction instruction outperformed other approaches on nearly all measures. Normative data for the direct instruction model in comparison to eight other major models show that the children in the former model are at or near national norms on all Metropolitan Achievement Test (MAT) measures at the end of the third grade. The conclusions drawn from these analyses are also supported by a reanalysis by Bereiter and Kurland.

Becker, W. C., and Gersten, R. A follow-up of Follow Through: The later effects of the direct instruction model on children in fifth and sixth grades. American Educational Research Journal, 19(1): 75-92, Spring 1982.

Low-income fifth and sixth graders who had completed the full three years of a first- through third-grade Direct Instruction Follow Through program were tested. Students appeared to retain the knowledge and problem-solving skills they had mastered in the primary grades.

Carnine, D. Direct instruction: A successful system for educationally high risk children. Journal of Curriculum Studies, 11(1): 29-45, Jan-Mar. 1979.

Explains how elementary school student achievement was improved by means of a direct instruction program involving reading and mathematics drilling, frequent low-level questions, high levels of teacher feedback, and instruction geared to the students' performance level.

Cicchelli, T. Forms and functions of instruction patterns: Direct and nondirect. Instructional Science, 12, 1983.

This article attempts to define direct and nondirect instruction from the literature and research completed on these topics. Direct instruction teaching behaviors include: the teacher is the dominant leader of the class, questioning technique includes a majority of narrow, recall questions, and the teacher reinforcing right answers.

Cicchelli, T. Implementing the direct instruction pattern: A study with primary grade low SES children. Urban Education, 17(4): 419-30, January 1983.

Discusses the direct instruction pattern which is based on teacher-centered classroom organization, as a workable teaching style, especially among children of the lower class. Describes teacher behaviors involved in implementing this teaching style, and suggests the use of implementing this teaching style, and suggests the use of an observation instrument to monitor direct instruction behaviors.

Duffy, G. G., et al. Two styles of direct instruction in teaching second-grade reading and language arts: A descriptive study. East Lansing Michigan State Univ. Institute for Research on Teaching, 1981. ERIC. ED 212 996.

Two second grade teachers, each categorized as a proponent of direct instruction, were studied using descriptive techniques. Each teacher was observed daily for 7 days, interviewed twice, and maintained a daily journal about his or her teaching. These data were used to compile case studies of the two teachers. Analysis of the data revealed that, while both teachers were similar in some ways, they were quite different in their conception of instructional role, response to mandates, and use of commercial materials. The findings support the hypothesis that the term direct instruction can mean many things.

Evertson, C. M., et al. Relationships between classroom behaviors and student outcomes in junior high mathematics and English classes. American Educational Research Journal, 17(1): 43-60, Spring 1980.

Sixty-eight teachers (39 English and 29 mathematics) were observed in two of their class sections. Relationships among teaching behaviors and student outcomes in mathematics classes suggest that elements of both the direct instruction model and indirect influence model are supported. Results in English classes are less clear.

Fedigan, L. School based elements related to achievement: A review of the literature. Edmonton: Planning and Research Branch, Alberta Education, Fall 1978.

Flanders (1965, 1970) and Gage (1965) completed research in which teacher "indirectness" was a variable that related to student achievement. Flanders defined indirect teaching as that in which the teacher accepts students' feelings, praises and encourages, accepts student ideas, and asks questions. However, Sloan's 1973 review shows that low socio-economic status children respond academically and positively to a pattern of direct instruction as defined by Rosenshine. The studies in Fedigan's review suggest that teaching behavior (direct or indirect) should depend upon student characteristics such as socio-economic status, age and/or previous ability.

Gersten, R. and Carnine, D. Direct instruction mathematics: A longitudinal evaluation of low-income elementary school students. The Elementary School Journal, 84(4), March 1984.

This article describes a direct instructional model that has been effective in teaching mathematics to low socio-economic status children. Gersten and Carnine employed a specific curriculum taught in rapidly-paced, small groups that emphasized a high success rate. The authors also present a system for monitoring both student and teacher performance.

Good, T. L. Teacher effectiveness in the elementary school. Journal of Teacher Education, 30(2): 52-64, Mar-Apr. 1979.

The concept of direct instruction in which the teacher sets and articulates goals, assesses student progress, and makes class presentations is presented along with a review of empirical research on which the concept is based and an assessment of its potential and limitations.

McFaul, S. A. An examination of direct instruction. Educational Leadership, 40(7): 67-69, April 1983.

Active, teacher-centered instruction is not necessarily effective with all students for all purposes.

Peterson, P. L. Direct instruction: Effective for what and for whom? Educational Leadership, 40(7): 67-69, April 1983.

Direct instruction is more effective for some purposes and students than for others. The approach used should depend on the type of student and the teacher's objectives.

Roehler, L. R. and Duffy, G. G. Matching direct instruction to reading outcomes. Language Arts, 49(5): 476-80, May 1982.

Examines four important outcomes of reading instruction -- to enjoy and appreciate reading, to understand reading's communication function, to find information, and to develop word recognition and comprehension strategies --and illustrates how direct instruction varies qualitatively from outcome to outcome.

Stennett, R. G. DISTAR reading program in junior opportunity classes: Phase III -- Impact of two full years of instruction. Special Education in Canada, 53(2): 7-10, Winter 1979.

A three-year controlled study of the feasibility and results of using the DISTAR (Direct Instruction System of Teaching and Remediation) reading program in junior opportunity classes was conducted with the following findings: 1) the DISTAR program can be successfully implemented in junior opportunity classes; 2) over a two-year period, students exposed to the DISTAR program improve their reading skills at a faster rate than students exposed to the traditional program; and 3) gains in reading skill mode by the junior opportunity class students exposed to either DISTAR or traditional programs are quite modest.

Talmage, H. and Rasher, S. P. A study of the effects of three dimensions of instructional time on academic achievement. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, April 1979.

The study addressed two questions: 1) what is the relationship between teacher preparation time and achievement? and 2) how does the "extent of curriculum coverage" influence academic achievement? The authors studied 165 elementary school classes that were using a sequential nutritional education curriculum. The researchers found that an increased amount of direct instructional time was "positively related to higher posttest scores of students with low prior achievement." Students with high prior achievement, however, showed decreasing posttest scores with increasing direct instruction. Increased teacher planning time appeared to benefit students with high prior achievement and to hinder those with low prior achievement.

17. Praise and Encouragement/Criticism

Brimner, L. D. The effects of praise and blame on writing. English Journal, 71(1): 58-60, January 1982.

Reports on a study that indicated the development of unhealthy attitudes toward writing in students who received negative feedback.

Brophy, J. On praising effectively. Elementary School Journal, 81(5): 269-78, May 1981.

Reviews research on teachers' praise in the classroom and proposes specific guidelines for helping teachers praise effectively. Time, concentrated attention, and individualization of remarks according to the student and the situation are considered crucial factors in praising effectively.

Brophy, J. Teacher praise. A functional analysis. Review of Educational Research, 51(1): 5-32, Spring 1981.

Teacher praise typically does not function as a reinforcer. Rather, it is reactive to and under the control of student behavior. Its effects must be understood using concepts from attribution and social learning/reinforcement theories.

Curwin, R. Are your students addicted to praise? Instructor, 90(3): 61-62, October 1980.

The author asserts that students can get "hooked" on praise to the point that they limit their creativity and manipulate others in search of it. He notes that teachers too may use praise manipulatively. He suggests ways for kicking this habit, primarily through more objective reinforcement messages. Three educators respond.

Fedigan, L. School-based elements related to achievement: A review of the literature. Edmonton: Planning and Research Branch, Alberta Education, Fall 1978.

The Texas Teacher Effectiveness Studies conducted in the mid to late 1980s concluded that different teaching behaviors are successful with different pupils depending upon their ability, socio-economic background and other personal characteristics. The Texas researchers found that high socio-economic children responded more favorably to criticism and challenges than did low SES students.

Medley, D. M. The effectiveness of teachers. In P. L. Peterson and H. J. Walberg (Eds.), Research on teaching. Berkeley, CA: McCutchan, 1979.

Medley's review presents many studies that have been significant in the process-product approach to effective teaching. In part, the author discusses the long-term effects of education; the development of the individual as a total person. "Teachers are hired to educate children, to produce important, lasting changes in their behavior, not short-term changes in test scores." Praise and encouragement may be used to develop self-esteem and studies indicate praise to be an effective teaching behavior for low socio-economic students, but not related to student achievement of high socio-economic students.

Mukhopadhyay, S. and Chugh, A. Developing a strategy for minimizing underachievement through teacher classroom behavior, 1979. ERIC. ED 207 725. Microfiche only.

Elementary school teachers were trained in specific classroom behaviors designed to improve student achievement. The study also examined effects of teacher influence on school anxiety and classroom trust. Teachers were trained to provide more positive feedback, to understand the needs of underachievers, and to involve more students in classroom discussion. Results indicated that training led teachers to increase positive feedback with students and decrease negative feedback. Academic achievement improved for all but the overachievers, classroom trust increased, and school anxiety decreased.

Rosenshine, B. and Furst, N. Research on teacher performance criteria. In B. Othanel Smith (Ed.), Research in teacher education: A symposium. Englewood Cliffs, New Jersey: Prentice Hall, 1971.

Presents results from several studies that indicate a relationship between student achievement and criticism. Positive correlations were achieved by Harris and Serwer (1966) and Morsh (1956) but according to most studies, a negative correlation exists between criticism and student achievement. The extent of the negative correlation depends upon the extent of the criticism. Teachers who employ extreme forms and amounts of criticism usually have lower achieving students.

Salzberg, R. S., and Salzberg, C. L. Praise and corrective feedback in the remediation of incorrect left-hand positions of elementary string players. Journal of Research in Music Education, 29(2): 125-33, Summer 1981.

Subjects of the study were five elementary class students (grades 4-6) who consistently performed with incorrect left-hand positions. Although students varied in response to different teaching styles, praise was always as effective as corrective feedback in changing the left-hand position and more durable in its effectiveness.

Stringer, B. R., and Hurt, H. T. To praise or not to praise: Factors to consider before utilizing praise as a reinforcing device in the classroom communication process. Paper presented at the annual meeting of the Southern Speech Communication Association, Austin, 1981. ERIC. ED 202 054.

For praise to have a positive effect on a child's achievement, teachers must be aware of some important research findings. Research in the past two decades has indicated more consistently that positive verbal reinforcement leads to improved achievement. Praise results in improved achievement only when it is congruent with student needs. Researchers are examining the relationship between praise and behavior, with studies indicating that praise reinforces appropriate classroom behavior and inappropriate behavior can best be controlled by ignoring it rather than punishing it.

Woolfolk, A. E. Student learning and performance under varying conditions of teacher verbal and non-verbal evaluative communication. Journal of Educational Psychology, 70(1): 87-94, February 1978.

Teachers presented four behavioral combinations -- (1) verbally and non-verbally positive; (2) verbally positive and non-verbally negative; (3) verbally negative and non-verbally positive; or (4) verbally and non-verbally negative -- to sixth grade students. Negative non-verbal behavior led to significantly greater performance. Teacher gender and student gender, and teacher's verbal behavior also influenced learning.

Workman, E. A., et al. The consultative merits of praise-ignore versus praise-reprimand instruction. Journal of School Psychology, 18(4): 373-80, Winter 1980.

Compared the effects of two behavior management strategies. More rapid and slightly greater improvement was achieved under the praise-soft reprimand combination than under the praise-ignore combination. Improvement in behavior diminished less rapidly in the reversals following the praise-ignore phases.

18. Individualization of Instruction

Good, T. L. and Brophy J. E. Looking at classrooms. New York: Harper and Row, 1973.

Good and Brophy discuss the use of individualized instruction depending upon the subject matter, teaching style, available resources, and student characteristics. Students who complete assignments more rapidly than others are often punished indirectly by being assigned more of the same work. The authors suggest many activities that will reward students who complete their work faster, such as learning centres and peer tutoring.

Slavin, R. E., Leavey, M. B., and Madden, N. A. Combining co-operative learning and individualized instruction: Effects on student mathematics achievement, attitudes and behaviors. The Elementary School Journal, March 1984.

Slavin, et al conducted two studies comparing team-assisted individualized learning, individualized instruction and traditional learning. Students were randomly selected for the three instructional programs from grades 3, 4 and 5. Student achievement, attitudes and behaviors were compared between the three groups. Results indicated that for the sample students, team individualized instruction was the most successful program with individualized instruction following second.

19. Questioning Techniques

Andre, T. Does answering higher level questions while reading facilitate productive learning? Review of Educational Research, 49(2): 280-318, Spring 1979.

Research on levels of questioning and their effects on learning is reviewed. It is shown that higher level questions facilitate reproductive and productive knowledge, but the reasons why are not clearly understood. An information processing model which accounts for question level effects is discussed.

Batson, A. D. Questioning: A reading/thinking foundation for the gifted. Paper presented at the annual meeting of the Southwest Regional Conference of the International Reading Association, San Antonio, 1981. ERIC. ED 201 999.

A study to determine the effects of higher level interactive questioning procedures on the cognitive abilities of gifted students was conducted with 14 gifted sixth grade students. The randomly assigned experimental group (both groups met for five weekly sessions) experienced a combination teaching strategy that included: (1) a personal graph on which students recorded the types of questions they asked or answered — recall, think critically, think creatively, and evaluate; (2) focused teacher preparation of questions; (3) student initiated questions; (4) plateaus strategy; and (5) emphasis on process rather than on number of correct answers. Pretest and Posttest scores on the Ross Test of Higher Cognitive Processes demonstrate that the higher cognitive processes used by the experimental students improved in the areas of sequencing and questioning strategies.

Bozsik, B. E. A study of teacher questioning and student response interaction during pre story and post story portions of reading comprehension lessons. Paper presented at the annual meeting of the American Educational Research Association, New York, 1982. ERIC. ED 215 294. Microfiche only.

The study examined the types of questions teachers (four preservice and four inservice) asked, the types of responses, the wait-time provided for high- and low-ability reading groups, and the discussion time provided high- and low-ability groups of reading comprehension lessons. The teachers were observed for six weeks, using the Question - Response - Interaction (QRI) instrument. The results showed that both types of teachers tended to pose more textually explicit questions to the low-ability group. The high-ability groups had more discussion time, received more textually implicit and raising type questions, and provided more supported responses. More wait-time between questions was accorded the high-ability group than the low-ability group, and more wait-time was given to pre-story portions than post-story portions of the reading lessons. There were minimal differences between preservice and inservice teachers regarding wait-time.

Crowell, D. C., and Hu-pei Au, K. A scale of questions to guide comprehension instruction. Reading Teacher, 34(4): 389-93, January 1981.

Presents evidence for the validity of a scale of questions that reflects levels of difficulty in reading comprehension.

Daines, D. Teachers' oral questions and subsequent verbal behaviors of teachers and students, 1982. ERIC. ED 225 979.

A portable minicomputer collected data about elementary and secondary social studies teachers' oral questions and the subsequent verbal behaviors of the teachers and the students. Data indicate that literal types of questions were posed most often by teachers at the rate of 1.5 per minute, and the duration of the students' answers was associated with the cognitive levels of the questions asked by the teacher. Teachers spent an average of 40% of the lesson time giving direct instructions to students and 20% on non instruction activities. Teachers asked low level questions. It is recommended that the skills of asking higher level thinking questions should be practised by teachers and that coaching be made available to increase these skills.

Dillon, J. T. Cognitive correspondence between question/statement and response. American Educational Research Journal, 19(4): 540-52, Winter 1982.

Analysis of teacher-student exchanges in high school discussion classes revealed that only half of all students' responses exhibited the same cognitive level as the teacher's intervention. The findings are compared to previous studies which together offer little support for the notion of cognitive correspondence between question and answer.

Dillon, J. T. To question and not to question during discussions: I. Questioning and discussion. Journal of Teacher Education, 32(5): 51-55, Sept.-Oct. 1981.

Questioning techniques are used in the classroom to initiate discussion and to exert teacher control over the class. However, question-answer relationships appear to foster respondent dependency and passivity. It is recommended that the teacher question only when he or she is perplexed and in need of information.

Dillon, J. T. To question and not to question during discussion: II. Non-Questioning techniques. Journal of Teacher Education, 32(6): 15-20, Nov-Dec. 1981.

The second in a series of articles focuses on the most effective nonquestioning techniques. Alternatives to questioning are given.

Donlan, D. and Singer, H. Active comprehension of short stories. Paper presented at the annual meeting of the Claremont Reading Conference. Claremont, Ca., 1979. ERIC. ED 170 705.

Three methods of preposed questioning aimed at improving student comprehension of short stories with a group of high school students is presented. It was found that when teachers preposed questions (a popular technique) comprehension tended to be narrowed because students focused on passages related to the preposed questions and that students attempted to satisfy the teacher's purpose in reading rather than their own. Best results were found with the schema self-preposed techniques in which students generated preposed, story-specific questions based on a schema of content-general questions.

Fedigan, L. School-based elements related to achievement. A review of the literature. Edmonton: Planning and Research Branch, Alberta Education, Fall 1978.

Fedigan presents studies that relate questioning techniques to the types of students and the subject matter. Evertson and Brophy have discovered that language arts teachers use more opinion and divergent questions whereas mathematics teachers ask more process, convergent questions. The Texas group suggest that successful questioning techniques will vary depending upon the grade levels of the students - as the students ages, there exists a positive correlation between probing, divergent questions and achievement. High socioeconomic level students respond more favorably to indirect questioning techniques compared to low SES students.

Finkelstein, J. M. and Ritter, V. F. Does anyone have any questions? 1980. ERIC. ED 188 768.

The purpose of the study was to determine if answering a child's question with a question produces further analytical questioning by the child. A sample of 80 children in nursery-kindergarten, first, second and third grades (ages ranging from 4-9 years) were divided into two groups. Group A children's responses were followed by questions from the interviewer. Children in Group B were responded to with positive statements. Findings indicate that, in comparison to positive replies, a teacher's questioning reply to a child's question does not produce increases in children's questioning behavior. It is suggested that age may be a factor. A relationship between the responses of the interviewer and the level of the child's questions was found. When the interviewer replied with a question, the child responded with a higher level question.

Gambrell, L. B. Think-Time: Implications for reading instruction. Reading Teacher, 34(2): 143-46, Nov. 1980.

Argues that allowing students five seconds to think about a question both before and after they answer it, improves the quality of the answers they give.

Gooding C. T. and Swift J. N. Modifying teacher questioning behavior in classroom interaction. Paper presented at the annual meeting of the Eastern Educational Research Association, West Palm Beach, 1982. ERIC. ED 214 769.

This project investigated the effects of increasing teachers' wait times on general questioning skills in science teaching. Variables were separated through the use of four treatment groups, each containing ten science teachers. A comparison group received no instruction. Treatment effects were maximized at the project's fifth week, and diminished as the school year's end approached. The greatest behavioral change noted in the analysis was the increase in the amount of total classroom discussion time with active student participation.

Graves, D. H., and Giacobbe, M. E. Research update: Questions for teachers who wonder if their writers change. Language Arts, 49(5): 495-503, May 1982.

Reports on two case studies of writing development in the primary grades. Notes the impact of teacher's questioning techniques on student development as writers and on teacher ability to evaluate student progress.

Holliday, W. G. Overprompting science students using adjunct study questions. Journal of Research in Science Teaching, 20(3): 195-201, March 1983.

The selective attention model was used to explain effects of overprompting students (N=170) provided with study questions adjunct to a complex flow diagram describing scientific cyclical schema. Strongly prompting students to answers of questions was less effective than an unprompted question treatment, suggesting that prompting techniques be used with extreme caution.

Honea, Jr. J. M. Wait-Time as an instructional variable: An influence on teacher and student. Clearing House, 56(4): 167-70, Dec. 1982.

Results of a study show that increasing the amount of time teachers allow for students to answer questions produces a number of positive results, including (1) increases in the length of student response, (2) increases in the number of unsolicited responses, and (3) improvement in student-to-student interaction.

Mahlios, M. and D'Angelo, K. Teacher questions: An experimental analysis of the question effect hypothesis. Paper presented at the annual meeting of the association of teacher educators, Orlando, 1983. ERIC. ED 227 062.

A study examined the effects of three types of teacher questions (literal, interpretive, applied) on: (1) frequency, length, and quality of student responses; (2) classroom interaction; (3) student questions; (4) intentional and incidental learning; and (5) student attitudes. Findings implied that the kinds of questions teachers ask directly influence the nature of student answers, both in length and in type, and that applied questions lead to greater amounts of feedback during classroom interaction. Some predictability in achievement can be afforded by altering question types, and higher level questions positively influence higher level achievement. Different question types may not differentially affect student attitudes toward the teacher or lesson.

McKenzie, G. R., and Henry, M. Effects of testlike events on on-task behavior, test anxiety, and achievement in a classroom rule-learning task. Journal of Educational Psychology, 71(3): 370-74, June 1979.

The effects of questions on attention and achievement were studied. Children were exposed to the same lesson and questions. Control subjects were called upon randomly, and experimental subjects were asked to indicate responses to every question with a nonverbal gesture. Questions addressed to individuals were less effective than questions used as test-like events.

Redfield D. L. and Rousseau, E. W. A meta-analysis of experimental research on teacher questioning behavior. Review of Educational Research, 51(2): 237-45, Summer 1981.

The meta-analytic technique was used to synthesize experimental research findings on the relationship between level of teacher questioning and student achievement. Results show that gains in achievement can be expected when higher cognitive questions assume a predominant role during classroom instruction.

Riley, II. J. P. A comparison of three methods of improving preservice science teachers' questioning knowledge and attitudes toward questioning. Journal of Research in Science Teaching, 17(5): 419-24, Sept. 1980.

Evaluated the comparative efficacy of the three most popular classfication systems in terms of preservice elementary teachers' ability to classify questions and their attitudes toward questioning. The classification schemes used were those of Aschner, Bloom, and Sanders. Advantages of the Aschner-based system are discussed.

Rucker, G. H. The teacher questioning measure, 1980. ERIC. ED 190 525.

The Teacher Questioning Measure (TQM) was developed to give the student teacher supervisor an objective means of evaluating the questions asked by the student teachers. This instrument was designed to measure six areas of cognitive skills: knowledge, comprehension, application, analysis, synthesis, and evaluation. Questions are measured on a scale from low levels of cognition, through progressive stages to questions requiring high level creative thinking. A description is given of how to use the TQM in observing student teachers and how to analyze results.

Sloan, L. V. and Toews, R. J. Good questioning techniques. The Canadian School Executive, March 1984.

Sloan and Toews suggest that a teacher who employs a variety of good questioning techniques will elicit responses from all students. The use of pauses after framing questions, feedback, and high/low order questions will encourage complete class participation. The authors list positive questioning behaviors (based on Hunter and Bloom) and desired outcomes.

Swift, J. N. Wait time and questioning skills of middle school science teachers. Final Technical Report. New York: New York State Univ. System, 1982. ERIC. ED 220 276.

This investigation focused on teachers' questioning skills and use of wait time. Forty experienced middle school science teachers were divided into 4 treatment groups of 10 teachers each. One group served as the comparison group and received neither instructions nor the electronic feedback device. The two groups using the electronic feedback device increased their wait time, used greater numbers of high level questions, and received more contributions from students as measured by length of answers, frequency of volunteered contributions, numbers of student relevant words, and percentages of student talk.

Tobin, K. G. The effect of an extended teacher wait-time on science achievement. Journal of Research in Science Teaching, 17(5): 469-75, Sept. 1980.

Investigated the effects of variation in teacher wait-time on science achievement for students (N = 733) in 11 Australian middle schools. Conclusions provide evidence that the extension of teacher wait-time produces desirable changes in achievement.

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AUDIO - VISUAL AND INSERVICE MATERIALS

1. Plans, Organization, and Implementation

Analyzing Learning Outcomes

1 filmstrip, 1 sound cassette, 1 booklet: 197?

In this program, techniques of task analysis are applied to learning objectives. Practice is provided so that an operation objective can be analyzed into subtests, designated as either entry or enroute skills. Use of a particular strategy is advocated in which instruction is approached in terms of learners' response rather than teacher presentations. Available: Library Services

Conceptualizing the Process of Instruction

1 film reel (8 min.), 2 teacher's guides, 31 booklets, 1 overview, 1 evaluation report: 1972

The materials in this kit are designed to assist teachers in analyzing and categorizing variables which occur in instructional situations. Available: Library Services

Essentially Yours: Content Selection

1 videocassette (13 min.), (Essentially yours series): 1972

Examines the criteria used as a base for content selection in a study unit. Available: Library Services

Essentially Yours: Evaluation

1 videocassette, (Essentially yours series): 1972

Reflects three major ambitions: to develop an effective means of communicating tc the classroom teacher the essence of planning instruction for students, to experiment with a system on ways of supporting the continuing education needs of teachers, and to change, while improvising. Available: Library Services

Essentially Yours: Generalizing

1 videocassette (13 min.), (Essentially yours series): 1972

Shows how a teacher should be able to design learning activities which develop the children's ability to generalize. Available: Library Services

Essentially Yours: Openers

1 videocassette (15 min.), (Essentially yours series): 1972

Develops the definition of 'openers,' as an integral part of the study unit. Available: Library Services

Essentially Yours: Teaching-Learning Strategies

1 videocassette (18 min.), (Essentially yours series): 1972

Identifies learning-inquiry operations, data gathering, data organization, data using, and presents teaching-learning strategies for students skill development in the study unit. Available: Library Services

Evaluating and Reporting Student Progress

1 filmstrip, 1 audiotape, 1 booklet: 1973

This kit takes a look at the evaluation of the student, provides evaluation guidelines, samples of report cards, and takes a look at providing incentives for students. (Model Schools Project) Available: Library Services

Evaluation

1 filmstrip, 1 sound cassette, 1 booklet: 197?

This program discusses a rigorous system for assessment of teaching. Test construction, item sampling, and interpretation of student performance data are given attention, and the critical role of preassessment of learner competency is emphasized. The viewer learns to select and construct test items appropriate to given objectives, to design both formal and informal pre-assessment procedures, and to make appropriate inferences regarding instruction based on data obtained from his students. Available: Library Services

The Impact of the Classroom Environment

1 film reel (17 min.): 1979

This film looks at the physical and emotional environment that a teacher can create in a classroom. It describes how the teacher uses the students and the space to create a particular environment. In addition, it describes how a teacher uses these items to create security for the student and increase the students' environment. Available: Library Services

Instructional Tactics for Affective Goals

1 filmstrip, 1 sound cassette, 1 booklet: 197?

Operating on the assumption that effective instructional goals are perhaps the most important that classroom teachers can accomplish, this program describes the general nature of three instructional tactics which are particularly useful for promoting the attainment of affective goals; specifically, modeling, contiguity, and reinforcement. Available: Library Services

Lesson Organization

1 videocassette (28 min., 39 sec.): 1980

In this tape we see the teacher, Mary Ann Gillese-Schmidt, and her Grade 10 English class at Austin O'Brien High School. The student is to look for the following characteristics of a well organized lesson: review, orientation to task, stated objectives, signals of transition, emphasis, clarity comprehension checking, personal organization and summary of the lesson. Available: University of Alberta

Mondays, Marbles, and Chalk

8 videotapes (3/4" VHS - each approx. 50 min.), workbooks, leader manuals: 1984?

This participatory series of eight video programs is designed specifically to help enhance and improve elementary school teachers' class management and discipline techniques. The tapes examine management strategies (preventive, supportive, corrective), personal and professional role use in the classroom, classroom climate, the child's basic human needs, family relationships and home atmosphere as a shared staff responsibility. Available: Marlin Motion Pictures, Ltd.

Organizing Facts to Teach Meaningful Relationships

1 film reel (15 min.), 2 teachers' guides, 31 booklets, 1 overview, 1 evaluation report: 1972

The film and related materials in this kit present the viewer with questions and two classroom situations intended to produce understanding of strategies involved in teaching for concept development and other forms of higher level learning. It also attempts to assist recognition by teachers of any new knowledge structures which have been attained by learners. Available: Library Services

3. Teacher's Expectations

What the Teacher Expects

1 film reel (27 min.): n.d.

Dr. Rosenthal (Harvard) and Dr. S. Rabensvitch (McGill) discuss the importance and application of "self-fulfilling prophecy": that which is expected of a person is that which he will perform according to. Experiments with students in teaching-reading combined with teacher expectations provide the basis for a panel in which teachers discuss expectations and performance. Available: Library Services

4. Teacher's Awareness

Body Language in Classroom

1 film reel (16 min.): 1973

The film moves from the general description of body language to classroom use of body language. The teachers used are effective users of body language to further their effectiveness as teachers. Some tips on the use of body language are given. Available: Library Services

Withitness (Junior High)

1 videocassette (20 min., 38 sec.): 1980

Withitness is a classroom management concept that is based on the principle that teachers who are aware of what is going on in their classrooms are more likely to have their students engaged in on-task behavior and less likely to be engaged in deviant behavior. This tape shows four behavior indicators of withitness: desist, concurrent praise, suggest alternate behavior, description of desirable behavior. The tape is an edited version of a lesson taught by Mrs. Louise Covey of D.S. MacKenzie Junior High School, Edmonton. Available: University of Alberta

Withitness (Elementary School)

1 videocassette (20 min., 4 sec.): 1980

Withitness is a classroom management concept that is based on the principle that teachers who are aware of what is going on in their classroom are more likely to have their students engaged in on-task behavior and less likely to be engaged in deviant behavior. This tape shows four behavior indicators of withitness: desist, concurrent praise, suggest alternate behavior, description of desirable behavior. The tape is an edited version of a lesson taught by Mrs. Darlene Hernstedt, John Barnett Elementary School, Edmonton. Available: University of Alberta

7. Classroom Management

Assertive Discipline in the Classroom

1 film reel (29 min.): 1978

This film describes an effective plan for establishing discipline in the classroom. Based on a system of rewards rather than a series of punishments, with a plan of implementation for the classroom, the assertive discipline program creates a controllable teaching environment. Available: Library Services

Behavior Management Procedures for the Classroom

1 videocassette (14 min., 45 sec.): 1979

Dr. Larry MacDonald presents four behavior-management procedures and their components. The four procedures are Praise, Ignore, Disapproval, and Time-Out. A negative example of each procedure is shown and discussed in light of its components and then a positive example of the procedure is demonstrated. The examples are from a classroom at the Evelyn Unger School for Language and Learning Development with teacher Karen Baine. Available: University of Alberta

Behavior Modifications in the Classroom

1 film reel (25 min.): 1970

This film studies several children in elementary and a class in junior high who are experiencing behavior problems. An analysis of the children's problems and teacher behavior as well as a follow-through to a program of changing teacher response and the reinforcement of desirable behavior is examined. Ways of motivating individuals in the classroom environment are discussed by teachers involved in this program. Available: Library Services

Behavioral Case Management

1 videocassette (23 min.): 1976

This tape suggests and illustrates a four step procedure for managing behavior problems. The first step, Information Gathering, is sub-divided into six sections; generating a behavioral check list; doing medical and informal questioning. The second section involves Diagnosis and in this case, the selection of a token economy program as an appropriate corrective measure. Proper Programming for the token economy is the third step and good follow-up is the fourth. This program was prepared and narrated by the counsellor, Lloyd Allen. Available: University of Alberta

Glasser on Discipline

1 film reel (28 min.): 1972

Dr. William Glasser describes in a lecture his views on what discipline should be. He feels that an undisciplined child is the result of a lack of knowledge of the child's needs, capabilities, wants and desires. This film describes in good detail the methods used to implement this approach. Available: Library Services

Glasser on Schools

1 film reel (19 min.): 1978

This is an introduction to Dr. William Glasser's no-failure approach to education. The film offers insights into typical school problems and why they exist. It also deals seriously with the matter of failure in school and what to do about it. Available: Library Services

Learner Accountability

1 videocassette (18 min., 3 sec.): 1980

Learner Accountability is a concept in classroom management. If the teacher makes children accountable for their learning, there is greater pupil involvement in work and less deviant behavior. This videotape shows three behavioral indicators of learner accountability; goal directed prompts, work showing and peer involvement. The tape shows an edited version of a Grade 9 language arts class at Woodhaven Jr. High school, Spruce Grove, Alberta, taught by Mr. Chuck Allen. Available: University of Alberta

Protocol modules on classroom management (Overview). Description of Teacher Inservice Education Materials, 1977. ERIC. ED 167 546.

These protocol modules on classroom management includes set of 4 16mm films, 1 Instructor's Manual and one copy of each of the four student manuals on the four areas covered: 1) Group Alerting; 2) Learning Accountability; 3) Transitions; 4) Withitness. This material has been tested and is used by the University of South Florida with their graduate students in education. Available: National Education Association. Project on Utilization of Inservice R & D Outcomes.

8. Feedback to Pupils

Effective Communication Skills #1: Paraphrasing

1 videocassette (25 min., 56 sec.): 1977

Ken McMillan, a graduate student in Educational Psychology, defines the term 'Paraphrasing' and introduces examples of how it is used to show interest in what is said and if a statement is understood correctly. Mrs. Sigrid Hundleby, a graduate student in Educational Psychology responds to stories and short statement by upper elementary students, in an effort to show the viewer of this videotape how paraphrasing works effectively in promoting interpersonal communication. The viewer is also given a chance to paraphrase statements made by students without the added responses of Mrs. Hundleby. This tape is one of a series of three tapes on effective communication skills. The other programs are 'Reflection of Feelings' and 'Open-ended Questions.' Available: University of Alberta

Effective Communication Skills #2: Reflection on Feelings

1 videocassette (26 min., 47 sec.): 1977

Ken McMillan, a graduate student in Educational Psychology, defines the term 'Reflection of Feelings' and introduces examples of how it is used to show persons you are aware of their feelings and are understanding their statements. Mrs. Sigrid Hundleby, a graduate student in Educational Psychology responds to stories and short statements by upper elementary students, in an effort to show the viewer of this videotape how reflection of feelings works effectively in promoting interpersonal communication. The viewer is also given a chance to use reflection of feelings with statements made by students without the added responses of Mrs. Hundleby. This tape is one of a series of three tapes on effective communication skills. The other programs are 'Paraphrasing' and 'Open-ended Questions.' Available: University of Alberta

Effective Communication Skills #3: Open-Ended Questions

1 videocassette (24 min. 43 sec.): 1977

Ken McMillan, a graduate student in Educational Psychology, defines the term "Open-ended Questions" and introduces examples of how it is used to encourage a person to keep talking without interrupting him. Mrs. Sigrid Hundleby, a graduate student in Educational Psychology responds to stories and short statements by upper elementary students in an effort to show the viewer of this videotape how open-ended questions work effectively in promoting interpersonal communication. The viewer is also given a chance to use open-ended questions without the added responses of Mrs. Hundleby. This tape is one of a series of three tapes on effective communication skills. The other programs are "Reflection of Feelings" and "Paraphrasing." Available: University of Alberta

Fair Verbal Behavior

1 film reel (15 mn.), 2 teachers' guides, 1 overview, 31 booklets, 1 evaluation report: 1972

The film in this kit presents two contrasting classroom situations relating to fair verbal behavior. The materials are designed to assist teachers in analyzing both the existence and the effects of fair and unfair verbal behavior. Available: Library Service

Prasie and Corrective Feedback

1 videocassette (18 min., 35 sec.): 1980

The quality of classroom interaction can be improved by the teacher's use of praise and corrective feedback. Two techniques of praise, verbal and nonverbal, and four techniques of corrective feedback; cueing, giving directions, maintaining responses, and probing; are exemplified in this lesson taught by Bob Bowen at Grace Martin Elementary School, Edmonton. Available: University of Alberta

Verbal interaction in the Cognitive Dimension

1 film reel (15 min.), 1 teacher's guide, 30 booklets, 1 overview, 1 evaluation report: 1972

This kit attempts to help teachers recognize the characteristics of verbal interaction; to identify a unit of analysis; to differentiate between teacher verbal behaviors that are task-oriented and those that are role-expectancy-oriented. In addition, the material tries to help them differentiate generally between study responses that are productive and those that reproduce the teacher's behavior; to hypothesize relationships between teacher verbal behaviors and student responses; and to recognize and be able to analyze teacher openness as a variable in interaction. Available: Library Services

11. Clarity of Instruction

Clarity and Emphasis

1 videocassette (19 min., 44 sec.): 1980

A teacher's use of language can affect pupil achievement. Two concepts relating to teacher language are clarity and emphasis. This videotape shows a teacher displaying two behavioral indicators for clarity - defining new words and using precise language and three behavioral indicators for emphasis - modulating one's voice, paraphrasing, emphasizing. The teacher is Mr. Dan Green at McKee Elementary School, Edmonton. Available: University of Alberta

17. Praise and Encouragement/Criticism

Praise and Corrective Feedback

The quality of classroom interaction can be improved by the teacher's use of praise and corrective feedback. Two techniques of praise, verbal and nonverbal, and four techniques of corrective feedback; cueing, giving directions, maintaining responses, and probing; are exemplified in this lesson taught by Bob Bowen at Grace Martin Elementary School, Edmonton. Available: University of Alberta

19. Questioning Techniques

Effective Communication Skills #3: Open-Ended Questions

1 videocassette (24 min. 43 sec.): 1977

Ken McMillan, a graduate student in Educational Psychology, defines the term "Open-ended Questions" and introduces examples of how it is used to encourage a person to keep talking without interrupting him. Mrs. Sigrid Hundleby, a graduate student in Educational Psychology responds to stories and short statements by upper elementary students in an effort to show the viewer of this videotape how open-ended questions work effectively in promoting interpersonal communication. The viewer is also given a chance to use open-ended questions without the added responses of Mrs. Hundleby. This tape is one of a series of three tapes on effective communication skills. The other program are "Reflection of Feelings" and "Paraphrasing." Available: University of Alberta

Essentially Yours: Concept Development

1 videocassette (20 min.), (Essentially yours series): 1972

Examines concept formation and the importance of questioning, cautions in concept development. Available: Library Services

Levels of Questioning

1 videocassette (25 min., 9 sec.): 1980

In this tape we see Mrs. Mary Ann Gilese-Schmidt and her English 30 class at Austin O'Brien High School. Using a lesson on essays we see her using and sequencing lower order questions involving memory, and higher order questions, which call on the student to translate, interpret, apply, analyze, synthesize, and evaluation. Available: University of Alberta

Effective questioning: Elementary level (Minicourse 1). Description of teacher inservice education materials, 1976. ERIC. ED 167 531.

A description of an inservice self-instructional minicourse intended to give teachers knowledge of and practice on using specific questioning techniques that increase students' participation and learning during class discussion. The classroom techniques include redirection, refocusing, handling incorrect responses, pausing, using higher cognitive questions, asking for clarification, and reducing teacher behavior that interferes with the flow of class discussion. Information is provided on the purposes and content of the course and materials as well as activities and resources. Available: National Education Association. Project on Utilization of Inservice Education R & D. Outcomes.

Effective questioning techniques (Implementive Module 3). Description of teacher inservice education materials, 1977. ERIC. ED 166 189.

The inservice learning module described here focuses on testing the teacher's understanding of and skill in using effective questioning techniques in the classroom. Inservice topics addressed include methods of verbal and non verbal accepting or encouraging; probing techniques; and methods of asking effective questions. This description provides information on the purposes and content of the module as well as activities and resources. Available: National Education Association. Project on Utilization of Inservice Education R & D Outcomes.

Higher cognitive questioning (Minicourse 9). Description of teacher inservice education materials, 1976. ERIC. ED 167 530.

The teacher inservice minicourse described here is designed to increase the teacher's use of higher cognitive questions, which helps develop student ability to think and is primarily concerned with analysis, synthesis, and evaluation questions. Information is provided on the purposes and content of the course and materials as well as activities and resources involved. Available: National Education Association. Project on Utilization of Inservice Education R & D Outcomes.

Questioning skills (Cluster V; 5 Modules -- A Summary). Description of teacher inservice education materials, March, 1977. ERIC. ED 169 064.

The described learning module is designed for teachers and educators who wish to improve their techniques of inquiry and questioning. The scope and sequencing of topics are described as well as the activities and resources involved in its use. Ordering information is provided, and a critique of the module is included. Available: National Education Association. Project on Utilization of Inservice Education R & D Outcomes.

Questioning that turns students on rather than off. Description of teacher inservice education materials, February, 1977. ERIC. ED 171 685.

The programmed materials for inservice teacher education described in this document are designed to make the teacher think about questioning techniques and learn some of the principles of good questioning procedures. The program is designed as a home study course. This report provides further information on the purposes and content of the program as well as activities and resources involved. A critique, history of development, and ordering information are also included. Available: National Education Association. Project on Utilization of Inservice Education R & D Outcomes.

The user of higher level questions (Module 2). Description of teacher inservice education materials, 1977. ERIC. ED 169 002.

The learning module described is designed for preservice and inservice classroom teachers interested in improving their questioning skills. It may be used by teachers at all grade levels. The scope and content of the module are outlined, and the activities and resources involved in its use are described. A critique of the module and ordering information are also included. Available: National Education Association. Project on Utilization of Inservice Education R & D Outcomes.

The use of questioning in social studies. Description of teacher inservice education materials, 1977. ERIC. ED 169 063.

The intent of the teacher education learning module described here is to increase the user's competency in asking questions that will stimulate higher levels of thinking and learning. Seven specific categories are outlined. The focus is on approaches to thorough and thought-provoking questioning, strategies for analyzing the nature of questions, and coordinating a progressive questioning structure. This descriptive report provides further information on the purposes and content of the program as well as activities and resources involved. Available: National Education Association. Project on Utilization of Inservice Education R & D Outcomes.

Questioning Strategies

1 videocassette (21 min., 44 sec.): 1980

In this tape we see Mr. Dan Green and his grade six class at McKee Elementary School in Edmonton. The tape presents various questioning strategies; positive questioning, personal questions, refocusing, redirection and soliciting feedback. Available: University of Alberta

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